ANNUAL INDEX

VOLUME 47

1970

AUTHORS

A

Achaya, K. T. See D. S. Raju
—— See G. Venkateswara Rao
Ackman, R. G. and S. N. Hooper. Hydrogenolysis products of the minor fatty acids from *Euphoria longana* seed oil, 525
Adamic, K., D. F. Bowman and K. U. Ingold. The inhibition of autoxidation by aromatic amines, 109
Albin, T. B. See J. C. Illman
Albright, Lyle F. Quantitative measure of geometrical isomerization during the partial hydrogenation of triglyceride oils, 295
—— Transfer and adsorption steps affecting partial hydrogenation of triglyceride oils, 490
Allen, R. R. and J. E. Covey, Jr. The effects of process variables on the formation of *trans*-unsaturation during hydrogenation, 494
Altenburger, Erich R., James W. Berry and Archie J. Deutschman, Jr. Synthesis of methyl sterculate, 77
Amundson, C. H. See G. O. Hustad
Anderson, B. A., C. A. Sutton and M. J. Pallansch. Optical activity of butterfat and vegetable oils, 15
Augustine, Robert L. and Jan F. Van Peppen. Some recent developments in the homogeneous catalyzed hydrogenation of olefins, 478
Ayres, J. C. See E. A. Childs
—— See Il-Young Maing

B

Bailar, John C., Jr. The selective homogeneous hydrogenation of soybean methyl esters, 475
Beal, R. E. See R. A. Eisenhauer
Beare-Rogers, Joyce L. The deposition of polyunsaturated fatty acids in the rat fed partially hydrogenated vegetable oil, 487
Berger, S. Edmund, Casimir V. Krolewski and Leslie C. Wizemann. Preservation of lipids with malic acid, 168
Berry, James W. See Erich R. Altenburger
Bhandari, A. M., S. Dubey and R. N. Kapoor. Uranyl soaps, 115
Black, George. Pilot unit determines design parameters of steam-jet vacuum equipment for production plants, 556A
Black, L. T. Direct determination of sodium in soybean oil by flame photometry, 313
Blessin, C. W. See G. W. Grams
Bose, P. K. Short communication re a rapid color reaction of crude sesame oil, 303
Bowman, D. F. See K. Adamic
Brandli, E. H. and R. M. Kelley. The automated determination of alkyl aryl sulfonates in spray-dried detergents by ultraviolet adsorption, 200
Brown, Mona. See R. O. Feuge
Bunn, Julian W., Jr. Moisture extraction concepts, design and practices from soybeans, 366A
Burkhardt, H. J. The phosphatides of safflower seeds involved in color formation occurring in extracted and heated crude oils, 69
—— and Glenn Fuller. A quantitative evaluation of a color problem in safflower oils, 219
Burnett, B. B. See E. P. Crowell
Butterfield, R. O. See Sambasivarao Koritala
—— See T. L. Mounts

C

Childs, E. A., J. C. Ayres and P. E. Koehler. Short communication re fluorometric measurement of aflatoxins, 461
Clawson, A. J. See F. H. Smith
Codifer, Louis P., Jr. See G. E. Mann
—— See Eric T. Rayner
Cordon, T. C., E. W. Maurer and A. J. Stirton. The course of biodegradation of anionic detergents by analyses for carbon, methylene blue active substance and sulfate ion, 203
Covey, J. E., Jr. See R. R. Allen
Cowan, J. C. See E. J. Dufek
—— See E. N. Frankel
—— See W. L. Kohlhase
—— C. D. Evans, Helen A. Moser, G. R. List, S. Koritala, K. J. Moulton and H. J. Dutton. Flavor evaluation of copper-hydrogenated soybean oils, 470
Crauer, L. S. Continuous treatment of refinery waste waters, 210A
Cross, C. K. Oil stability: A DSC alternative for the active oxygen method, 229
Cross, D. E., D. T. Hopkins, E. L. D'Aquin and E. A. Gastrock. Experiments with solvent extraction of glandless cottonseed and glanded cottonseed, 4A
Crowell, E. P. and B. B. Burnett. Determination of aldehydes in mixtures of mono- and dicarboxylic acids, 281
Cucullu, Alva F., Louise S. Lee, W. A. Pons, Jr., and L. A. Goldblatt. Determination of aflatoxins in peanut and cottonseed soapstocks, 226

D

D'Aquin, E. L. See D. E. Cross
David, Norman D. See Urban L. Diener
de Bruijn, J. See H. van Tilborg
Deck, Rudolph E. and Kay K. Kaiser. Analytical method for determining copper in edible shortenings and oils, 126
de Jong, K. See B. van der Ven
Deutschman, Archie J., Jr. See Erich R. Altenburger
Diamond, M. J. and Glenn Fuller. Some chemical processes utilizing oleic safflower oil, 362
Dickens, J. W. See T. B. Whitaker
Diener, Urban L. and Norman D. Davis. Limiting temperature and relative humidity for aflatoxin production, by *Aspergillus flavus* in stored peanuts, 347
Dollear, F. G. See G. E. Mann
—— See Eric T. Rayner
Dringoli, L. J. See P. Sosis
Dubey, S. See A. M. Bhandari
Dufek, E. J., J. C. Cowan and J. P. Friedrich. Ethylene adduct of conjugated octadecadienoic acids: II. Ozonization products, 51
—— L. E. Gast and J. P. Friedrich. Ethylene adduct of conjugated octadecadienoic acids: I. Peracid oxidation products, 47
Dunn, Suzanne C. See M. E. Ginn
Dupuy, H. P. See S. P. Fore
—— and S. P. Fore. Determination of residual solvent in oilseed meals and flours: II. Volatilization procedure, 231
Dutton, Herbert J. Computer-guided explorations in lipid chemistry, 98A
—— See J. C. Cowan
—— See Sambasivarao Koritala
—— See T. L. Mounts
—— See C. R. Scholfield

E

Earle, F. R. Epoxy oils from plant seeds, 510
Edwards, J. D., Jr. Synthesis of gossypol and gossypol derivatives, 441
Eisenhauer, R. A., R. E. Beal and E. L. Griffin, Jr. Water recycle method for washing alkali-refined soybean oil, 137
Eldridge, L. See A. C. Mottola
Evans, C. D. See J. C. Cowan

F

Fehl, A. J. See E. S. Lutton
Feuge, R. O. See Z. M. Zarins
—— H. J. Zeringue, Jr., T. J. Weiss and Mona Brown. Preparation of sucrose esters by interesterification, 56
Findley, T. W. See R. S. Klonowski
Finger, B. M. See J. C. Illman
Fisher, H. D. See J. P. Nelson
Foglia, T. A., E. T. Haeberer and G. Maerker. Addition of N,N-dibromosulfonamides to internal olefins: Synthesis of N-sulfonylaziridines, 27
—— G. Maerker and G. R. Smith. Preparation of epiminostearates. Comparison of methods, 384
Fore, S. P. See H. P. Dupuy
—— and H. P. Dupuy. Determination of residual solvent in oilseed meals and flours: I. Dimethyl formamide extraction procedure, 17
Frankel, E. N. Conversion of polyunsaturates in vegetable oils to *cis*-monounsaturates by homogeneous hydrogenation catalyzed with chromium carbonyls, 11
—— Homogeneous catalytic conjugation of polyunsaturated fats by chromium carbonyls, 33
—— F. L. Thomas and J. C. Cowan. Stereoselective hydrogenation of model compounds and preparation of tailor-made glycerides with chromium tricarbonyl complexes, 497
Freedman, Bernard. Gas liquid and thin-layer chromatographic analysis of 12-aminostearic acid, 305
—— and Glenn Fuller. Reductive amination of 12-ketostearic acid, 311
Friberg, Stig and L. Mandell. Phase equilibria and their influence on the properties of emulsions, 149
Friedrich, J. P. See E. J. Dufek
Frommer, D. W. Iron ore flotation—1969, 189
Fukuzumi, Kazuo and Nobuo Ikeda. The effect of antioxidants in the autoxidation of methyl conjugated *cis, trans*-octadecadienoates, 369
Fuller, Glenn. See H. J. Burkhardt
—— See M. J. Diamond
—— See Bernard Freedman
—— See R. M. McCready

G

Gardner, H. K., Jr. See G. E. Mann
Garrett, V. H. See C. K. Lyon
Gast, L. E. See E. J. Dufek
—— See A. W. Schwab
Gastrock, E. A. See D. E. Cross
Gauger, Mona. See R. M. McCready
Ginn, M. E., Suzanne C. Dunn and Eric Jungermann. Contact angle studies on viable human skin: II. Effect of surfactant ionic type in pretreatment, 83
Glowacki, C. R., P. J. Menardi and W. E. Link. The analysis of 1,2-epoxyalkanes by gas liquid chromatography, 225
Goldblatt, L. A. See Alva F. Cucullu
Gottenbos, J. J. See H. van Tilborg
Grams, G. W., C. W. Blessin and G. E. Inglett. Distribution of tocopherols within the corn kernel, 337
Graveland, A. Enzymatic oxidations of linoleic acid and glycerol-1-monolinoleate in doughs and flour-water suspensions, 352
Griffin, E. L., Jr. See R. A. Eisenhauer

H

Haas, S. R. Report on vegetable oilseeds production and vegetable oil production in the Republic of South Africa, 40A
Haeberer, E. T. See T. A. Foglia
Hammond, E. G. See R. G. Seals
Harada, Ichiro. See Mamoru Komoda
Harper, Garlon A. Account of Dr. Lyman's research on gossypol and its significance and impact on the cottonseed industry, 438
Hartman, Kenneth T. and Lucien C. Rose. A rapid gas chromatographic method for the determination of BHA and BHT in vegetable oils, 7
Hashimoto, Shigeru. See Toshio Nagai
Hedberg, M. C. Cationic flotation of silica from magnetic iron-ore concentrates, 177
Hedrick, Glen W. See Wilmer A. Rohde
Heidelbaugh, N. D. and M. Karel. Effect of water-binding agents on the catalyzed oxidation of methyl linoleate, 539
Hendricks, M. H. Measurement of enzyme laundry product dust level and characteristics in consumer use, 207
Hensarling, T. P. See T. J. Jacks
—— See L. Y. Yatsu
—— L. Y. Yatsu and T. J. Jacks. Extraction of lipids from cottonseed tissue: II. Ultrastructural effects of lipid extraction, 224
Herb, S. F. See Francis E. Luddy
—— and V. G. Martin. How good are analyses of oils by GLC? 415
Herring, V. See A. C. Mottola
Higuchi, Katsuhiko. See Satoshi Nakasato
Hikota, Takeshi and Kenjiro Meguro. The effect of position of ester group on critical micelle concentration of ester-linked sulfonates, 197
Hikota, Takeshi and Kenjiro Meguro. Preparation and properties of sodium alkyl β-sulfopropionates, 158
Hooper, S. N. See R. G. Ackman
Hopkins, D. T. See D. E. Cross
Hughes, Francis A. and Baak W. Lew. Physical and functional properties of some higher alkyl polyglycosides, 162
Hustad, G. O., T. Richardson and C. H. Amundson. Urethane polymers from hydroxylated fish oil, 333

I

Ikeda, Nobuo. See Kazuo Fukuzumi
Illman, J. C., B. M. Finger, W. T. Shebs and T. B. Albin. Cold water detergency studies using radiolabeled soils, 379
Imamura, Tetsuya. See Fumikatsu Tokiwa
Inglett, G. E. See G. W. Grams
Ingold, K. U. See K. Adamic

XUM

J

Jacks, T. J. See T. P. Hensarling
—— See L. Y. Yatsu
—— L. Y. Yatsu and T. P. Hensarling. Extraction of lipids from cottonseed tissue: I. Comparison of hexane-acetone-water, its nonaqueous components and chloroform-methanol, 222
Jellum, M. D. Development changes in fatty acid composition of oil in kernel fractions of corn *(Zea mays L.)*,245
Jewell, G. G. and M. L. Meara. A new and rapid method for the electron microscopic examination of fats, 535
Johnson, Dale W. Functional properties of oilseed proteins, 402
Jongenotter, G. A. See P. W. Meijboom
Josefson, C. M. See R. S. Klonowski
Jungermann, Eric. See M. E. Ginn

K

Kaimal, T. N. B. and Gollamudi Lakshminarayana. Limitations of periodate-permanganate oxidation in determination of glyceride composition: Nonquantitative oxidation and hydrolysis of azelaoglycerides, 193
Kaiser, Kay K. See Rudolph E. Deck
Kapoor, R. N. See A. M. Bhandari
Karel, M. See N. D. Heidelbaugh
Karinkanta, Hannu. See Reino R. Linko
Kartha, A. R. S. Short communication re the abnormal proportions of di-unsaturated glycerides in some pig depot fats, 75
—— Short communication re a standardized procedure for oxidative determination of fully saturated glycerides in natural fats, 366
—— and Y. Selvaraj. Short communication re first double bond site distributions in 16 vegetable and six animal reserve fats, 365
Kaunitz, Hans. Nutritional properties of coconut oil, 462A
Kavanagh, T. E.. G. A. Reineccius, P. G. Keeney and W. Weissberger. Mold induced changes in cacao lipids, 344
Keeney, P. G. See T. E. Kavanagh
Kelley, R. M. See E. H. Brandli
Kenyon, William R. Aerated lagoons for the treatment of fats and oil industry wastes, 402A
King, C. G. Biological and medical aspects of fats, 418A
Kingsbaker, C. L. Solvent extraction techniques for soybeans and other seeds: Desolventizing and toasting, 458A
Kirschner, E. and E. R. Lowrey. The effect of process conditions on positional and geometric isomerization during partial hydrogenation of trilinolein with copper catalyst, 467
—— and E. R. Lowrey. Positional and geometrical isomerization during partial hydrogenation of trilinolein: A comparison of copper and nickel catalysts, 237
Klonowski, R. S., T. W. Findley, C. M. Josefson and A. J. Stirton. Oleyl alcohol from animal fats by catalytic reduction, 326
Koch, G. K. See H. van Tilborg
Koehler, P. E. See E. A. Childs
Kohlhase, W. L., E. H. Pryde and J. C. Cowan. 9-Aminononanamide and nylon-9 from azelaaldehydic derivatives of soybean oil, 183
Kohler, G. O. See A. C. Mottola
Koltun, S. P. See G. E. Mann
Komoda, Mamoru and Ichiro Harada. Interaction of tocored with unsaturated fatty esters, 249
Koritala, Sambasivarao. Hydrogenation of unsaturated fatty esters with copper-chromite catalyst kinetics, mechanism and isomerization, 463
—— Selective hydrogenation with copper catalysts: III. Hydrogen addition and isomerization, 269
—— Short communication re selective hydrogenation of soybean oil: V. A novel copper catalyst with excellent re-use properties, 106
—— See J. C. Cowan
—— See C. R. Scholfield
—— R. O. Butterfield and H. J. Dutton. Selective hydrogenation with copper catalysts: II. Kinetics, 266
—— and C. R. Scholfield. Selective hydrogenation with copper catalysts: I. Isolation and identification of isomers formed during hydrogenation of linolenate, 262
Krolewski, Casimir V. See S. Edmund Berger
Krzeczkowski, Richard A. Fatty acids in raw and processed Alaska pink shrimp, 451

L

Lakshminarayana, Gollamudi. See T. N. B. Kaimal
Larose, J. A. G. See M. E. McKillican
Lauro, M. F. Short communication re the determination of fish oil in vegetable oils, 234
Lawhon, J. T. Pretreating delintered cottonseed to increase yield of whole kernels, 102
Lee, Louise S. See Alva F. Cucullu
Lew, Baak W. See Francis A. Hughes
Liebenow, Robert C. Closing the world protein gap, 498A
Lillard, H. S. See Il-Young Maing
Link, W. E. See C. R. Glowacki
Linko, Reino R. and Hannu Karinkanta. Fatty acids of long chain length in Baltic herring lipids, 42
Linn, F. See D. H. Wheeler
List, G. R. See J. C. Cowan
Lowrey, E. R. See E. Kirschner
Luckadoo, B. M. See E. R. Sherwin
Luddy, Francis E., S. F. Herb, Paul Magidman, Ann Marie Spinelli and Aaron E. Wasserman. Color and the lipid composition of pork muscles, 65
Lutton, E. S., C. B. Stewart and A. J. Fehl. Phase behavior of homologous series of monoesters of polyols, 94
Lyon, C. K. and V. H. Garrett. Diol diricinoleates from dihaloalkanes, 145

M

Maarleveld, A. See P. W. Meijboom
Maerker, G. See T. A. Foglia
Magidman, Paul. See Francis E. Luddy
Maing, Il-Young, H. S. Lillard and J. C. Ayres. The rapid separation of aflatoxins on silica gel coated glass cylinders, 212
Mandell, L. See Stig Friberg
Mankowich, A. M. Letter to the editor re suspension stability of solid particles in the presence of various types of electrolytes, 234
Mann, G. E., L. P. Codifer, Jr., H. K. Gardner, Jr., S. P. Koltun and F. G. Dollear. Chemical inactivation of aflatoxins in peanut and cottonseed meals, 173
Marion, W. W., S. T. Maxon and R. M. Wangen. Lipid and fatty acid composition of turkey liver, skin and depot tissue, 391
Mark, A. M. See C. A. Wilham
Marker, G. See T. A. Foglia
Martin, V. G. See S. F. Herb
Masri, Merle Sid. Extraction partition and column chromatographic separation of aflatoxins B_1 and M_1, 61
Mathur, J. M. S. Pathway of triglyceride biosynthesis during seed ripening, 100
Maurer, E. W. See T. C. Cordon
Maxon, S. T. See W. W. Marion
Meara, M. L. See G. G. Jewell
Meguro, Kenjiro. See Takeshi Hikota
Mehltretter, C. L. See C. A. Wilham
Mehrotra, K. N., V. P. Mehta and T. N. Nagar. Solubility and refractometric studies with copper valerate and caproate in nonaqueous solutions, 519
—— V. P. Mehta and T. N. Nagar. Studies on surface tension and parachor of copper soap solutions in nonaqueous solvents, 329
Mehta, V. P. See K. N. Mehrotra
Meijboom, P. W., G. A. Jongenotter and A. Maarleveld. Short communication re 4-*cis*-heptenal in autoxidized soybean and linseed oils?, 414
Menardi, P. J. See C. R. Glowacki
Mikolajczak, K. L., C. R. Smith, Jr. and I. A. Wolff. Short communication re stability of crude sunflower oils to autoxidation and to seed aging, 24
Milun, A. J. See J. P. Nelson
—— See D. H. Wheeler
Mori, Akira. See Toshio Nagai
Moser, Helen A. See J. C. Cowan
—— See E. Selke
Mottola, A. C., L. Eldridge, V. Herring and G. O. Kohler. A comparison of passive cutaneous anaphylaxis guinea pig responses using an intravenous or an intradermal route for antigen challenge, 458
Moulton, K. J. See J. C. Cowan
Mounts, T. L., R. O. Butterfield, C. R. Scholfield and H. J. Dutton. Micro vapor-phase hydrogenation monitored with tandem chromatography-radioactivity: III. Isomeric monoenes, 79

Mc

McCready, R. M., G. Fuller and Mona Gauger. Nitrogen determination for rapid quality control of oilseed meals, 171
McGuire, T. A. See C. A. Wilham
McKillican, M. E. and J. A. G. Larose. Residual lipids of hexane-extracted rapeseed meal, 256

N

Nagai, Toshio, Shigeru Hashimoto, Izumi Yamane and Akira Mori. Gas chromatographic analysis for alpha-olefin sulfonate, 505
Nagar, T. N. See K. N. Mehrotra
Nakasato, Satoshi and Katsuhiko Higuchi. Syntheses of dialkyl trichloromethylphosphonates and their properties for additives, 283
Nelson, J. P., A. J. Milun and H. D. Fisher. Gas chromatographic determination of tocopherols and sterols in soya sludges and residues—an improved method, 259

O

O'Connor, Robert T. and S. F. Herb. Specifications of fatty acid composition for identification of fats and oils by gas liquid chromatography, 186A
Oser, Bernard L. Assessment of the nutritional value of novel proteins, 453

P

Pallansch, M. J. See B. A. Anderson
Parris, N. See J. K. Weil
Patterson, Stella J., C. C. Scott and K. B. E. Tucker. Nonionic detergent degradation: III. Initial mechanism of the degradation, 37
Pence, R. E. and A. L. Wurstner. Short communication re application of the scanning electron microscope to detergency problems, 147
Pierce, R. M. Sunflower processing techniques, 248A
Pons, W. A., Jr. See Alva F. Cucullu
Pryde, E. H. See W. L. Kohlhase

R

Raju, D. S., M. R. Subbaram and K. T. Achaya. Isomerization during hydrogenation of soap: II. Potassium elaidate and potassium linoleate, 374
Rao, G. Venkateswara and K. T. Achaya. Monohydroxylation of unsaturated oils: I. Sulfation-hydrolysis and sultone-formation, 286
—— and K. T. Achaya. Monohydroxylation of unsaturated oils: II. Autoxidation-reduction, 289
—— R. Subbarao and K. T. Achaya. Monohydroxylation of unsaturated oils: III. Use of halogen intermediates, 292
Rawls, H. Ralph and P. J. van Santen. A possible role for singlet oxygen in the initiation of fatty acid autoxidation, 121
Rayner, Eric T., F. G. Dollear and Louis P. Codifer, Jr. Short communication re extraction of aflatoxins from cottonseed and peanut meals with ethanol, 26
Reineccius, G. A. See T. E. Kavanagh
Rich, A. D. Some fundamental aspects of bleaching, 564A
Richardson, T. See G. O. Hustad
Rice, Eldon E. Nutritive values of oilseed proteins, 408
Riiner, U. Investigation of the phase behavior of *Cruciferae* seed oils by temperature programmed x-ray diffraction, 129
Riser, G. R. See F. Scholnick
Rohde, Wilmer A. and Glen W. Hedrick. Esters of rosin acids and glycidyl ethers, 3
Rohwedder, W. K. See E. Selke
Ronzio, R. A. The role of surfactants in the flotation of molybdenite at climax, 504A
Rose, Lucien C. See Kenneth T. Hartman
Rothfus, John A. Newer techniques in protein isolation and characterzation, 316
Roubal, William T. Trapped radicals in dry lipid-protein systems undergoing oxiation, 141
Rylander, Paul N. Hydrogenation of natural oils with platinum metal group catalysts, 482

S

Saggese, E. J. See F. Scholnick
Saunders, R. M. The sugars of safflower, 254
Schmidt, H. J. Hydrogenation of triglycerides containing linolenic acids: II. Continuous hydrogenation of vegetable oils, 134
Scholfield, C. R. See Sambasivarao Koritala
—— See T. L. Mounts
—— and H. J. Dutton. Gas chromatographic equivalent chain lengths of isomeric methyl octadecenoates and octadecynoates, 1
—— and S. Koritala. Short communication re a simple method for preparation of methyl *trans*-10, *cis*-12-octadecadienoate, 303
Scholnick, F., E. J. Saggese, A. N. Wrigley and G. R. Riser. Urethane foams from animal fats: V. Flame resistant foams from hypohalogenated glycerides, 180
Schwab, A. W. and L. E. Gast. Free radical addition of hydrogen sulfide to conjugated and nonconjugated methyl esters and to vegetable oils, 371
Scott, C. C. See Stella J. Patterson
Seals, R. G. and E. G. Hammond. Some carbonyl flavor compounds of oxidized soybean and linseed oils, 278
Selke, E., Helen A. Moser and W. K. Rohwedder. Tandem gas chromatography-mass spectrometry analysis of volatiles from soybean oil, 393
Selvaraj, Y. See A. R. S. Kartha
Shannon, G. M. See R. D. Stubblefield
Shebs, W. T. See J. C. Illman
Sherwin, E. R. and B. M. Luckadoo. Studies on antioxidant treatments of crude vegetable oils, 19
Shoolery, J. N. and L. H. Smithson. The use of a high resolution NMR spectrometer controlled by a dedicated com-

puter for quantitative analytical chemistry, 153
Shotwell, O. L. See R. D. Stubblefield
Skau, Evald L. Correlation of solubility data: IV. Prediction of solubilities of homologous and analogous long chain compounds in related solvents, 233
Smith, C. R., Jr. See K. L. Mikolajczak
Smith, F. H. and A. J. Clawson. The effects of dietary gossypol on animals, 443
Smith, G. R. See T. A. Foglia
Smith, Keith J. Practical significance of gossypol in feed formulation, 448
Smithson, L. H. See J. N. Shoolery
Sosis, P. and L. J. Dringoli. Sulfation of synthetic linear primary alcohols with chlorosulfonic acid, 229
Spinelli, Ann Marie. See Francis E. Luddy
Stewart, C. B. See E. S. Lutton
Stirton, A. J. See T. C. Cordon
—— See R. S. Klonowski
—— See J. K. Weil
Stubblefield, R. D., G. M. Shannon and O. L. Shotwell. Aflatoxins M_1 and M_2: Preparation and purification, 389
Subbaram, M. R. See D. S. Raju
Subbarao, R. See G. Venkateswara Rao
Sutton, C. A. See B. A. Anderson
Suzuki, Hiroshi. Determination of critical micelle concentration of surfactant by ultraviolet absorption spectra, 273
Swern, Daniel. Reactions of the oxirane group, 424

T

Templeton, Harold C. Corrosion of alloys in tall oil distillation service, 138A
Thomas, Betty W. See W. J. Wolf
Thomas, F. L. See E. N. Frankel
Thomas, George R. The art of oilseed meal grinding, 360A
Tokiwa, Fumikatsu and Tetsuya Imamura. Building action of various types of inorganic electrolytes, 117
—— and Tetsuya Imamura. Importance of alkalis, dispersants and sequestrants in building action, 422
Trowbridge, James T. Statistical analysis of detergency tests with a natural soil, 112
Tucker, K. B. E. See Stella J. Patterson

V

Vandenburg, L. E. and E. A. Wilder. The structural constituents of carnauba wax, 514
van der Ven, B. and K. de Jong. Optical activity of lactones from animal and vegetable fats, 299
Van Peppen, Jan F. See Robert L. Augustine
van Santen, P. J. See H. Ralph Rawls
van Tilborg, H., J. de Bruijn, J. J. Gottenbos and G. K. Koch. Metabolism of *ortho*-alkylbenzenealkanoic acids in rats, 430
Velasco, James. Letter to the editor re the determination of aflatoxin in peanut and cottonseed soapstocks, 414

W

Waltking, Arthur E. and Helen Zmachinski. Fatty acid methodology for heated oils, 530
Wangen, R. M. See W. W. Marion
Wasserman, Aaron E. See Francis E. Luddy
Weber, Evelyn J. Lipids of maturing grain of corn (Zea mays L.): II. Changes in polar lipids, 340
Weil, J. K., N. Parris and A. J. Stirton. Synthesis and properties of sulfated alkanolamides, 91
Weiss, T. J. See R. O. Feuge
Weissberger, W. See T. E. Kavanagh
Wheeler, D. H., A. Milun and F. Linn. Dimer acid structurres: Cyclic structures of clay catalyzed dimers of normal linoleic acid, 9-*cis*, 12-*cis*-octadecadienoic acid, 242
Whitaker, T. B., J. W. Dickens and E. H. Wiser. Design and analysis of sampling plans to estimate aflatoxin concentrations in shelled peanuts, 501
Whitten, M. E. Aflatoxins in cottonseed hulls, 5
Wilder, E. A. See L. E. Vandenburg
Wilding, M. D. Oilseed proteins. Present utilization patterns, 398
Wilham, C. A., T. A. McGuire, A. M. Mark and C. L. Mehltretter. Starch-derived polyelectrolytes as builders in heavy duty detergent formulations, 522
—— C. L. Mehltretter and T. A. McGuire. Short communication re cationic fatty acid derivatives aid retention of starch and pigment color in cellulosic pulp, 304
Willich, R. K. See Z. M. Zarins
Wiser, E. H. See T. B. Whitaker
Wizemann, Leslie C. See S. Edmund Berger
Wolf, W. J. Short communication re scanning electron microscopy of soybean protein bodies, 107
—— and Betty W. Thomas. Thin layer and anion exchange chromatography of soybean saponins, 86
Wolff, I. A. See K. L. Mikolajczak
Wrigley, A. N. See F. Scholnick
Wurstner, A. L. See R. E. Pence

X—Y—Z

Yamane, Izumi. See Toshio Nagai
Yatsu, L. Y. See T. P. Hensarling
—— See T. J. Jacks
—— T. J. Jacks and T. Hensarling. Use of ferric chloride to decolorize cottonseed oil, 73
Zarins, Z. M., R. K. Willich and R. O. Feuge. Reaction of cyclopropene esters with hydrogenation catalysts, 215
Zeringue, H. J., Jr. See R. O. Feuge
Zmachinski, Helen. See Arthur E. Waltking

SUBJECTS

A

9-Acetamidononanamide, synthesis, 183
Acetone-hexane-water, extraction of cottonseed, 4A
Acid oil, comp from oil refining, 210A
Acidulated soapstock, comp from oil refining, 210A
Activated clays, effect on peroxides in oils, 564A
Aflatoxins, anal of, 212
—— chemical inactivation in meals, 173
—— column chromatographic separation, 61
—— in cottonseed hulls, 5
—— ethanol extraction from oilseed meals, 26
—— fluorometric measurement, 461
—— in peanut and cottonseed soapstock, 226
—— in peanuts, effect of temp and humidity, 347
—— sampling of peanuts for anal, 501
—— separation on silica gel, 212
—— in soapstocks, 414
—— in stored peanuts, 347
Aflatoxins B_1 and M_1, chromatographic separation, 61
Aflatoxin M, prep and purification, 389
Africa, South, vegetable oilseed production, 40A
Alcohol ethoxylates, cold water detergency, 379
Alcohols, in carnauba wax, 514
—— fatty, β-sulfopropionates from, 158
—— linear synthetic, sulfation, 229
—— sulfation with chlorosulfonic acid, 229
Alcoholysis, of fatty esters by sucrose, 56
Aldehydes, dtmn in carboxylic acids, 281
Aleurone grains, in soybean cells, 316
Alkali refining, water wash procedure, 137
Alkalis, as detergent builders, 422
Alkane sulfonates, GLC anal, 505
Alkanolamide sulfates, properties of, 91
Alkanolamides, sulfation of, 91
Alkyl aryl sulfonates, automated dtmn of, 200
—— use in iron ore flotation, 189
Alkylbenzenealkanoic acids, metabolism in rats, 430
Alkylbenzenesulfonates, cold water detergency, 379
—— effect on skin contact angle, 83
Alkylphenol ethoxylates, biodegradation, 37
Alkyl polyglucosides, properties of, 162
Alkylsulfates, biodegradation, 203
—— CMC by UV absorption, 273
—— flotation of molybdenite, 504A
Alkyl β-sulfopropionates, prep and properties, 158
Alkyl trichloromethylphosphonates, synthesis and properties, 283
Allergens, intradermal challenge test, 458
—— intravenous challenge test, 458
Allergy, of castor pomace, 458
Amination, reductive of 12-ketostearic acid, 311
Amine oxides, effect on skin contact angle, 83
—— reaction with epoxides, 424
Amines, inhibition of autoxidation, 109
—— for iron ore flotation, 177
—— use in iron ore flotation, 189
Amino acid destruction, in lipid-protein systems, 141
Amino acids, essential, 453
—— in oilseed proteins, 408
9-Aminononanamide, synthesis from soybean oil, 183
12-Aminostearic acid, anal of, 305
—— synthesis, 311
Anionic detergents, biodegradation, 203
Anionic surfactants, CMC by UV absorption, 273
Antigen challenge, castor pomace, 458
Antioxidants, autoxidation of conjugated octadecadienoates, 369
—— dtmn of BHA and BHT in oils, 7
—— effectiveness of aromatic amines, 109
—— treatment of crude oils, 19
Arachis oil (peanut), proposed GLC comp for Codex Committee, 186A
Aspergillus flavus, in stored peanuts, 347
Autoxidation, antioxidant effect on conjugated octadecadienoates, 369
—— of fatty acids, mechanism, 121
—— inhibition by aromatic amines, 109
—— linoleate in aqueous systems, 539
—— of oils, 289
—— photochemical, 121
—— of pork, effect of water, 539
—— of sunflower oil, 24
Autoxidized oils, reduction of, 289
Azelaaldehyde derivatives, of soybean oil, 183
Azelaic acid, from high oleic safflower oil, 362
Aziridines, prep, 384

B

Babassu oil, optically active lactones, 299
Baked products, use of soy flour, 402
Behenates, phase behavior of mono esters, 94
Beneficiation, of iron ore by flotation, 189
BHA. See butylated hydroxyanisole
BHT. See butylated hydroxytoluene
Biodegradation, of anionic detergents, 203
—— of fats and oils, 402A
Biological value (BV), definition, 453
Bleaching, effect on peroxides, 564A
—— of fats and oils, review, 564A
Borates, as builders in detergents, 117
—— in detergent formulas, 422
Borax, in detergent formulas, 422
Brassica campestris, polymorphic phases, 129
Brassica napus, polymorphic phases, 129
Bread, soy flour in, 402
Broilers, effect of gossypol in feed, 448
Bromination, of oils with with N-bromosuccinimide, 292
Builders, in detergent formulations, 422
—— evaluation, 117
Butterfat, optical activity of, 15
—— optically active lactones, 299
Butter flavor, in oxidized soybean oil, 278
Butylated hydroxyanisole (BHA), dtmn in vegetable oils, 7
—— effect on autoxidation of conjugated octadecadienoates, 369
—— treatment of crude vegetable oils, 19
Butylated hydroxy toluene (BHT), effect on autoxidation of conjugated octadecadienoates, 369
—— dtmn in vegetable oils, 7
BV. See biological value

C

Cacao lipids, effect of mold, 344
Campesterol, retention times of butyrates in GLC, 259
Caproic acid, properties of copper salts, 519
Caprylic acid, in animal nutrition, 462A
Carbonates, as builders in detergents, 117
—— in detergent formulas, 422
Carbonyl compounds, dtmn in fatty acid ozonolysis products, 281
Carbonyl flavor, of oxidized oils, 278
Carboxymethyl starch, as detergent builder, 522
Carnauba wax, constituents of, 514
Castor allergens, evaluation methods, 458
Castor pomace, antigenicity, 458
Catalysts, hydrogenation, destruction of cyclopropene acids, 215
Cation exchange resins, use in washing of refined oil, 137
Cationic flotation, of silica from iron ore, 177
Cationic products, as starch retention agents in pulp, 304
Cationic surfactants, CMC by UV absorption, 273
CCD. See countercurrent distribution
CD. See coefficient of digestibility
Cellulosic pulp, improvement of starch retention by cationics, 304
Centrifugation, density gradient, 316
Cerebrosides, in corn, 340
Chemical score, of protein, 453
Cholesterol, in human serum, with coconut oil in diet, 462A
—— in nutrition, 418A
—— of pork muscle lipids, 65
tris(triphenylphosphine)Chlororhodium, homogeneous hydrogenation with, 478
Chromatography, 1970 Committee Report, 552A
—— of isotope labeled esters, computer data processing, 98A
—— separation of aflatoxins, 61
Chromatography, gas, BHA and BHT in oils, 7

XUM

—— ECL of isomeric-enoic and -ynoic acids, 1
—— of isomeric octadecenoates and octadecynoates, 1
—— of isomeric octadecenoic and octadecynoic acids, 1
—— 1970 Committee Report, 552A
Chromatography, gas-liquid, collaborative anal of oils, 415
—— 1970 Committee Report, 552A
—— precision of oil anal, 415
—— specifications of FA comp for Codex Committee, 186A
Chromium carbonyls, as conjugation catalysts, 33
—— as hydrogenation catalysts, 11
Chromium tricarbonyl complexes, in hydrogenation, 497
Citric acid, comparison with malic for oil stabilization, 168
Clays, use in bleaching oils, 564A
CMC. See critical micelle concentration
Cocoa butter, effect of moldy beans, 344
—— synthetic from cottonseed stearine, 497
Coconut oil, nutritional properties, 462A
—— optically active lactones, 299
—— precision of collaborative GLC anal, 415
Coconut primary amine, in iron ore flotation, 177
Coconut-1,3-propylene diamine, in iron ore flotation, 177
Coconut soapstock, typical anal, 210A
Codex Alimentarius, committee on Fats and Oils, 186A
Coefficient of digestibility (CD), definition, 453
Color, removal from oil by bleaching, 564A
—— in safflower oils, 219
Computers, applications to lipid chemistry, 98A
—— simulation of hydrogenation, 98A
Conjugated acids, hydrogenation with copper catalysts, 266, 269
—— simulation of hydrogenation, 98A
Conjugated dienoic acids, ethylene adducts, 47
Conjugated linoleic acid, addition of hydrogen sulfide, 371
Conjugated octadecadienoates, autoxidation, 369
Conjugation, during hydrogenation with copper catalysts, 266, 269
—— of unsaturates by chromium carbonyls, 33
Copper, anal in oils, 564A
—— dtmn in edible oils, 121
Copper caproate, in non-aqueous solvents, 519
Copper catalysts, isomerization during hydrogenation, 237
—— kinetics of selective hydrogenation, 266, 269
—— selective hydrogenation, 262, 266, 269
Copper-catalyzed hydrogenation, 467
—— mechanism, 463
Copper-hydrogenated soybean oil, flavor of, 470
Copper hydrogenation catalyst, 106
Copper soaps, parachor in solvents, 329
—— surface tension in nonaqueous systems, 329
Copper valerate, in non-aqueous solvents, 519
Corn, linids during maturation, 340
—— nutritional value of protein, 408
—— polar lipids, 340
—— tocopherols of, 337
Corn linids, fatty acid of, 340
Corn oil, anal of heated oil, 530
—— fatty acid comp during seed development, 245
—— heated, fatty acid comp, 530
—— ozonolysis, 362
—— partially hydrogenated in rat diets, 487
—— precision of collaborative GLC anal, 415
—— proposed comp by GLC for Codex Committee, 186A
Coronaric acid, in seed oils, 510
Corrosion, of alloys in tall oil distillation, 138A
Cottonseed, decortication, 102
—— effect of solvent extraction on tissue structure, 224
—— glandless, extraction of, 4A
—— glandless, kernels from, 102
—— nutritional values of protein, 408
—— pretreatments to obtain whole kernels, 102
—— production in South Africa, 40A
—— solvent extraction, glandless and glanded, 4A
Cottonseed flour, dtmn of residual solvent, 17
Cottonseed hulls, aflatoxins in, 5
Cottonseed meal, aflatoxin extraction, 26
—— chemical inactivation of aflatoxins, 173
—— dtmn of residual solvent, 17
—— effect of gossypol on nutritional value, 438, 443
—— feed value from glandless seed, 4A
Cottonseed oil, anal of heated oil, 530
—— comp, using different solvents, 222
—— decolorizing by ferric chloride, 73
—— isomers during hydrogenation, 295
—— malic acid vs. citric acid for AOM stability, 168
—— ozonolysis, 362
—— precision of collaborative GLC anal, 415
—— proposed comp by GLC for Codex Committee, 186A
—— reaction of cyclopropenoid acids with hydrogenation catalysts, 215
—— treatment with antioxidants, 19
Cottonseed oil stearine, hydrogenation to synthetic cocoa butter, 497
Cottonseed soapstock, aflatoxins in, 226
Countercurrent distribution, computer simulation, 98A
Crambe abyssinica, polymorphic phases, 129
Crambe oil, phase behavior by x-ray diffraction, 129
Critical micelle concentration (CMC), of sulfoacetates and sulfopropionates, 197
—— by UV absorption, 273
Cruciferae seed oils, polymorphism, 129
Cyclopropenoid acids, hydrogenolysis of, 525
—— reaction with hydrogenation catalysts, 215

D

5-Decene, addition of dibromosulfonamides, 27
Density gradient centrifugation, 316
Deodorization, scrubbing of exhaust steam, 556A
Deodorizer distillate, scrubbing system, 556A
Desolventizer-toaster, for extracted oilseeds, 458A
Desolventizing, of extracted oilseeds, 458A
Detergency, of alkyl polyglucosides, 162
—— in cold water, 379
—— statistical anal of, 112
—— study by scanning electron microscope, 147
—— use of radiolabeled soil, 379
Detergency measurement, with a natural soil, 112
Detergents, anionic, biodegradation, 203
—— automated dtmn of alkyl aryl sulfonates, 200
—— CMC by UV absorption, 273
—— CMC of alkyl sulfoacetates and sulfopropionates, 197
—— effect of builders, 422
—— enzyme modified, dustiness, 207
—— GLC anal of alkane sulfonates, 505
—— nonionic, biodegradation, 37
—— properties of alkyl sulfonpropionates, 158
—— starch based builders, 522
—— various electrolytes as builders, 117
Dialkyl trichloromethylphosphonates, synthesis and properties, 283
Dibasic acids, permanganate oxidation of fats, 365
Dibromoalkanes, ester formation with ricinoleic acid, 145
Dibromosulfonamides, addition to olefins, 27
Dicarbonyls, in oxidized soybean oil, 278
Dichloroalkanes, ester formation with ricinoleic acid, 145
N,N-Dichlorourethane, in aziridine synthesis, 384
Differential scanning calorimeter (DSC), dtmn of oil stability, 229
Digalactosyl diglycerides, in corn, 340
Dihydrosterculic acid, hydrogenolysis of, 525
Dimer acids, structures from clay catalyzed polymerization of linoleic acid, 242
Dimethyl formamide, reaction with oxirane group, 424
Dimethyl sulfoxide, reaction with epoxidized esters, 424
Diol esters, of ricinoleic acid, 145
Dispersants, in detergent formulas, 422
Dodecane sulfonate, biodegradation, 203
Donuts, soy flour in, 402
Drying, of soybeans, 366A
DSC. See differential scanning calorimeter
Dust, from enzyme modified detergents, 207

E

Edible oils, dtmn of copper, 121
—— stability measurement by DSC, 229
EDTA. See ethylenediaminetetraacetate
Elaidic acid, methyl ester, synthesis of aziridine, 384
—— potassium soap, hydrogenation of, 374
Electron microscopy, of fats, 535
Electron paramagnetic resonance (EPR), in oxidizing lipid-protein systems, 141
Eleostearate, hydrogenation with chromium carbonyl complexes, 497
—— hydrogenation with copper catalysts, 266, 269
Eleostearic acid, methyl ester, addition of hydrogen sulfide, 371
Emulsions, influence of phase equilibria on properties, 149
Emulsion stability, factors influencing, 149
Enzyme laundry products, dustiness, 207
cis-9,10-Epiminooctadecane, synthesis, 384
trans-9,10-Epiminooctadecane, synthesis, 384
Epiminostearates, prep, 384
Epoxides, reaction with dimethyl sulfoxide, 424
—— reactions of, 424
Epoxidized oils, conversion to hypohalogenated derivative, 180
Epoxyalkanes, GLC anal, 225
1,2-Epoxydodecane, GLC anal, 225
1,2-Epoxyhexadecane, GLC anal, 225
9,10(cis)-Epoxy-11(trans), 13-hydroxy-octadecenoic acid, 352
9,10-Epoxy-trans-3, cis-12-octadecadienoic acid, 510
9,10-Epoxyoctadec-12-ynoic acid, 510
Epoxy oils, from plant seeds, review, 510
1,2-Epoxytetradecane, GLC anal, 225
EPR. See electron paramagnetic resonance
Erysimum orientale, polymorphic phases, 129
Erythritol, phase behavior of mono esters, 94
Essential amino acids, in protein sources, 453
Esters, in carnauba wax, 514
Ethanolamine, alkanolamides from, 91
Ether alcohol sulfates, biodegradation, 203
Ethoxylated alcohols, biodegradation, 37
—— CMC by UV absorption, 273
—— in ore flotation, 504A
Ethoxylated nonylphenol, effect on skin contact angle, 83
Ethylene adducts, of dienoic acids, epoxidation, 47
—— of dienoic acids, oxidation of, 47
—— of dienoic acids, ozonization, 51
—— of octadecadienoic acids, 47
Ethylenediaminetetraacetate (EDTA) in detergent formulas, 422
Ethylene glycol, phase behavior of mono esters, 94
Ethylene oxide, conformation, 424
Euphoria longana, comp of oil, 525
—— hydrogenolysis of seed oil, 525
Extraction, cottonseed by acetone-hexane-water, 4A
—— of cottonseed with various solvents, 222, 224
—— of glandless cottonseed, 4A
—— of sunflower seed, 248A

F

Fats, biodegradation in lagoons, 402A
—— biological aspects, review, 418A
—— bleaching of, 564A
—— electron microscopy, 535
—— location of double bonds, 365
—— nutrition, 418A
—— polyunsaturated, conjugation by chromium carbonyls, 33
—— specification for comp by GLC, 186A
—— of turkey tissues, 391
—— unsaturated, double bond location, 365
—— waste treatment in lagoons, 402A
Fatty acids, of corn lipids, 340
—— essential, in coconut oil diets, 462A
—— in heated oils, 530
—— of herring lipids, 42
—— mechanism of autoxidation, 121
—— medium chain in animal nutrition, 462A
—— scrubbing from deodorizer exhaust, 556A
—— solubility prediction, 233
—— sucrose esters, 56
—— tall oil, precision of collaborative GLC anal, 415
—— unsaturated, reaction with tocored, 249
—— use in iron ore flotation, 189
Fatty alcohol ethoxylates, biodegradation, 37
Fatty alcohols, β-sulfopropionates from, 158
FE. See feed efficiency
Feed efficiency (FE), definition, 453
Feeds, effect of gossypol, 438, 443, 448
Fish meal, nutritional value of protein, 408
Fish oil, from alewife, 333
—— dtmn in vegetable oils, 234
—— epoxidation, 333
—— hydroxylated, urethanes from, 333
—— urethanes from, 333
Fish protein concentrate, oxidative changes, 141
Flame photometry, sodium in soybean oil, 313
Flash desolventizer, for extracted oilseeds, 458A
Flavor, of copper-hydrogenated soybean oil, 470
Flavor stability, copper-hydrogenated oil, 470
Flotation, of iron ore, 189
—— of molybdenite, 504A
—— of silica from iron ore, 177
Flour, cottonseed, dtmn of residual solvent, 17
—— enzymatic oxidation of linoleate in dough, 352
—— oilseed, dtmn of solvent in, 231
—— soy, dtmn of residual solvent, 17
—— soy, scanning electron microscopy, 107
Food emulsifiers, evaluation of alkyl polyglucosides, 162
Foods, containing oilseed proteins, 398, 402
—— improvement of world supply, 498A
Free radicals, in lipid-protein systems, 141
Frying fats, changes in comp during use, 530
Functional properties, of oilseed protein, 402

G

Galactosyl glycerides, in corn, 340
Garcinia indica fat, glyceride comp, 193
Gel filtration chromatography, of proteins, 316
Geometrical isomers, in hydrogenated oils, 295
Glandless cottonseed, kernels from, 102
—— solvent extraction, 4A
GLC. See chromatography, gas-liquid
Glucosides, poly-, properties of alkyl derivatives, 162
Glyceride composition, limitation of oxidation methods, 193
Glycerides, biosynthesis in seeds, 100
—— mechanism of hydrogenation, 490
—— of pork muscle, 65
—— saturated, dtmn in fats, 366
Glycerol-1-monolinoleate, oxidation in doughs, 352
Glycidyl ethers, esters with rosin acids, 3
Glycolipids, of maturing corn, 340
Goat milk fat, optically active lactones, 299
Gossypol, chemical reactions, 441
—— detoxification in cottonseed meal, 443
—— effect in animal feeding, 438, 443
—— Memorial Symposium, beginning on page 438
—— physiological activity, 438, 443
—— removal from cottonseed oil by ferric chloride, 73

—— review, 438
—— synthesis of, 441
—— toxicity, 443
Grindings, of oilseed meals, 360A
Groundnut oil (peanut), proposed GLC comp for Codex Committee, 186A

H

Heated oils, fatty acid comp, 530
Heat treatment, of oilseed meals, 458A
Hens, laying, effect of gossypol in feed, 448
4-cis-Heptenal, in autoxidized oils, 414
cis-4-Heptenal, in oxidized soybean oil, 278
Heptene-1, homogeneous hydrogenation, 478
Heptene-2, homogeneous hydrogenation, 478
2-Heptene, addition of dibromosulfonamides, 27
Herring lipids, long chain fatty acids of, 42
Hexacosahexaenoic acid, in herring lipids, 42
Hexacosapentaenoic acid, in herring lipids, 42
17-Hexacosenoic acid, in herring lipids, 42
Hexadecyloxyethyl sulfate, biodegradation, 203
Hexarecyloxpropyl sulfate, biodegradation, 203
Hexadecyl sulfate, biodegradation, 203
Hexane, dtmn of oilseed meals, 231
—— extraction of cottonseed, 4A
—— removal from extracted oilseeds, 458A
3-Hexene, addition of dibromosulfonamides, 27
Hexyl-α-sulfopelargonate, biodegradation, 203
Homogeneous catalysis, of conjugation, 33
Homogeneous hydrogenation, with rhodium catalyst, 478
—— of soybean esters, 475
Homogeneous platinum catalysts, selective hydrogenation, 475
Hydrocarbons, in carnauba wax, 514
Hydrogenated oils, effect on fatty acids of rats, 487
Hydrogenation, of aqueous soap solutions, 374
—— chromium tricarbonyl complexes, 497
—— computer simulation, 98A
—— continuous, 134
—— effect of geometric configuration, 79
—— effect of process conditions on isomers, 467
—— effect of process variables on *trans* content, 494
—— homogeneous catalyst, 478
—— homogeneous of soybean esters, 475
—— homogeneous with chromium carbonyl catalysts, 11
—— isomerization during, 237, 295
—— isomerization index as proposal to measure isomers, 295
—— *trans isomers*, 494
—— isomers from linolenate, 262, 266
—— isomers using nickel and copper catalysts, 237
—— kinetics, 490
—— mechanism, 490
—— mechanism using copper catalysts, 266, 269
—— micro vapor-phase, 79
—— of oils containing linolenic acid, 134
—— selective copper catalyst, 106, 262, 266
—— selective of soybean oil, 134
—— stereoselective, 497
—— Symposium, beginning on page 463
—— transfer and adsorption stops, 490
—— trilinolein with copper catalyst, 467
—— with copper catalysts, kinetics, 266, 269
—— with copper chromite catalyst, 463
—— with homogeneous platinum catalysts, 475
—— with homogeneous rhodium catalyst, 478
—— with platinum group catalyst, 482
Hydrogenation catalysts, destruction of cyclopropene acids, 215
Hydrogenolysis, *Euphoria longana* seed oil, 525
—— of methyl oleate, 326
Hydrogen sulfide, addition to oils, 371
Hydroperoxy-octadecadienoic acid, from linoleic acid oxidation in dough, 352
13-Hydroperoxy-9(cis),11(trans)-octadecadienoic acid, 352
9-Hydroperoxy-10(trans),12(cis)-octadecadienoic acid, 352
Hydroxy acid esters, in carnauba wax, 514
Hydroxy acids, by sulfation of oils, 286
p-Hydroxy cinnamic acid, in carnauba wax, 514
Hydroxy-epoxy-octadecenoic acid, from linoleic acid oxidation in dough, 352
9-Hydroxy-10(trans),12,13(cis)epoxy-octadecenoic acid, 352
Hydroxylated oils, through halogen intermediates, 292
Hydroxylation, of fish oil, 333
—— of oils by autoxidation-reduction, 289
—— of unsaturated oils via sulfates, 286
9-Hydroxynonanamide, synthesis, 183
9-Hydroxy-10(trans),12(cis)-octadecadienoic acid, 352
13-Hydroxy-9(cis),11(trans)-octadecadienoic acid, 352
3-Hydroxypropylamine, alkanolamides from, 91
Hypercholesteremia, effect of coconut oil in diet, 462A
Hypohalogenated oils, prep of, 180

I

Immunoelectrophoresis, of proteins, 316
Instrumental Techniques, 1970 Committee Report, 552A
Iodine isocyanate, addition to olefins, 384
Iodine value, change in heated frying oils, 530
—— by NMR spectroscopy, 153
Ion exchange resins, use in washing of refined oil, 137
Iridium, in catalytic hydrogenation, 482
Iron ore, flotation, 189
—— purification by cationic flotation, 177
Isoelectric focusing, of proteins, 316
Isolated soy protein, in foods, 398, 402
Isomerization, during copper catalyst hydrogenation, 467
—— during copper chromite hydrogenation, 463
—— during homogeneous hydrogenation, 478
—— during hydrogenation, 490
—— during hydrogenation, mathematical model, 295
—— during hydrogenation with platinum metals, 482
—— during selective hydrogenation with copper catalysts, 262, 266, 269
Isomerization index, proposed measure of isomers in hydrogenated oils, 295
Isomers, formation during hydrogenation, 237
—— in partially hydrogenated oils, 295
cis-Isomers, by stereoselective hydrogenation, 497
trans-Isomers, anal. in oils, 564A
Isopropyl-α-sulfostearate, biodegradation, 203

K

α-Ketols, synthesis from epoxides, 424
12-Ketostearic acid, reductive amination, 311
Kjeldahl determination, rapid digestion procedure, 171
Kusum oil, hydroxylation by sulfation-hydrolysis, 286

L

Lactones, in oils, optical activity of, 299
Lagoons, aerated, fatty waste treatment, 402A
Lard, electron microscopy of, 535
—— flame-resistant urethane foams from, 180
—— malic acid vs. citric acid for AOM stability, 168
—— precision of collaborative GLC anal, 415
—— proposed comp by GLC for Codex Committee, 186A
LAS. See linear alkyl benzene sulfonate
Laundry detergents, with enzymes, dustiness, 207
Laurates, phase behavior of mono esters, 94
Lauric acid, alkanolamides of, 91
—— in animal nutrition, 462A
Lauryl primary amine, in iron ore flotation, 177
Linear alkane sulfonates, GLC anal, 505
Linear alkylbenzene sulfonates (LAS), cold water detergency, 379
—— dtmn in detergents, 200
Linoleate, conjugation by chromium carbonyls, 33
—— effect of water on autoxidation, 539
Linoleic acid, autoxidation of methyl ester, 121
—— conjugated, addition of hydrogen sulfide, 371
—— conversion to *trans*-10-*cis*-12-octadecadienoate, 303
—— hydrogenation using copper catalyst, 467
—— methyl ester, addition of hydrogen sulfide, 371
—— oxidation in doughs, 352
—— potassium soap, hydrogenation of, 374
—— requirements in diets based on hydrogenated coconut oil, 462A
—— structure of dimers from, 242
Linolenate, conjugation by chromium carbonyls, 33
—— hydrogenation with copper chromite, 463
—— isomer formation during hydrogenation, 262, 266, 269
Linolenic acid, methyl ester, addition of hydrogen sulfide, 371
Linseed esters, cyclized, metabolism by rats, 430
Linseed oil, addition of hydrogen sulfide, 371
—— carbonyl flavor of oxidized oil, 278
—— cyclized, metabolism by rats, 430
—— 4-*cis*-heptenal in autoxidized, 414
—— hydroxylation by autoxidation-reduction, 289
—— hydroxylation with sulfuric acid, 286
—— hydroxylation through halogen intermediates, 292
—— precision of collaborative GLC anal, 415
Lipid-protein system, free radicals during oxidation, 141
Lipids, application of computers, 98A
—— biological aspects, review, 418A
—— of maturing corn, 340
—— peroxidized, free radicals from, 141
—— of pork muscle, 65
—— of turkey tissues, 391
Lipoxygenase, oxidation of linoleate, 352
Lysine, binding by gossypol, 438
Lysophosphatidyl choline, in corn, 340

M

Maize, change in oil comp during maturation, 245
Maize oil (corn), proposed comp by GLC for Codex Committee, 186A
Malic acid, comparison with citric acid for oil stabilizaton, 168
Malvalic acid, methyl ester, reaction with hydrogenation catalysts, 215
Mannitol, phase behavior of mono esters, 94
Marine oils, dtmn in vegetable oils, 234
Meals, cottonseed, aflatoxin extraction, 26
—— cottonseed, chemical inactivation of aflatoxins, 173
—— cottonseed, dtmn of residual solvent, 17
—— cottonseed, feed value from glandless seed, 4A
—— effect of desolventizing methods, 458A
—— grinding of, 360A
—— oilseed, dtmn of residual solvent, 17
—— oilseed, rapid nitrogen dtmn, 171
—— oilseed, residual solvent in, 231
—— peanut, aflatoxin extraction, 26
—— peanut, chemical inactivation of aflatoxins, 173
—— rapeseed, residual lipids of, 256
—— rapid nitrogen dtmn in, 171
—— soybean, dtmn of residual solvent, 17
—— soybean, grinding of, 360A
Meat-like oilseed protein foods, 398
Meats, use of soy proteins, 402
Medium chain fatty acids, in animal nutrition, 462A
Mercaptans, addition of hydrogen sulfide to fatty acids, 371
p-Methoxy cinnamic acid, in carnauba wax, 514
1-Methylene-4-t-butylcyclohexane, homogeneous hydrogenation, 478
Methyl carbitol palmitate, alcoholysis by sucrose, 56
Methyl cellosolve palmitate, alcoholysis by sucrose, 56
Methyl eleostearate, addition of hydrogen sulfide, 371
Methyl esters, prep for GLC anal., 552A
N-Methyl-N-hydroxyethylamine, alkanolamides from, 91
Methyl laurate, alkanolamides of, 91
Methyl linoleate, addition of hydrogen sulfide, 371
—— autoxidation, 121
—— effect of water on autoxidation, 539
Methyl linolenate, addition of hydrogen sulfide, 371
Methyl malvalate, reaction with hydrogenation catalysts, 215
Methyloleate, addition of dibromosulfonamides, 27
—— addition of hydrogen sulfide, 371
Methyl palmitate, alkanolamides of, 91
Methyl stearate, alkanolamides of, 91
Methyl sterculate, reaction with hydrogenation catalysts, 215
—— synthesis, 77
Microscopy, electron of fats, 535
Milk, human, nutritive value versus cereals, 408
Mills, for meal grinding, 360A
Miscella refining, waste water treatment, 2[illegible]
Molybdenite, flotation of, 504A
Molybdenite sulfide, flotation of, 504A
Monogalactosyl diglycerides, in corn, 340
Monolinolein, oxidation in doughs, 352
Monopalmitin, alcoholysis by sucrose, 56
cis-Monounsaturates, by homogeneous hydrogenation, 11
Mustardseed oil, hydroxylation by sulfation-hydrolysis, 286
—— phase behavior by x-ray diffraction, 129
—— proposed comp by GLC for Codex Committee, 186A
Myristates, phase behavior of mono esters, 94

N

Naphthalene sulfonic acid-formalin condensate, in detergent formulas, 422
NDGA. See nordihydroguaiaretic acid
Net protein ratio (NPR), definition, 453
Net protein utilization (NPU), definition, 453
Nickel catalysts, isomerization during hydrogenation, 237
Nitrilotriacetate (NTA), in detergent formulas, 422
Nitrogen, rapid dtmn in oilseed meals, 171
NMR. See nuclear magnetic resonance
Nonanal, dtmn in ozonized fatty acids, 281
Nonionic detergents, biodegradation, 37
Nonionic surfactants, CMC by UV absorption, 278
Nordihydroguaiaretic acid (NDGA), effect on autoxidation of conjugated octadecadienoates, 369
NPR. See net protein ratio
NPU. See net protein utilization
NTA. See nitrilotriacetate
Nuclear magnetic resonance (NMR), computer control of, 153
—— IV dtmn, 153
—— 1970 Committee Report, 552A
Nutrition, coconut oil in, 462A
Nutritional value, of new protein sources, 453
Nutritive value, of oilseed proteins, 408
Nylon-9, from soybean oil, 183

O

Octacosapheptaenoic acid, in herring lipids, 42
Octadecadenoates, conjugated, antioxidants in autoxidation, 369
trans-10,cis-12-Octadecadienoate, prep of, 303
Octadecadienoic acids, ethylene adducts, 47
Octadecatrienoates, hydrogenation with copper catalysts, 266, 269
Octadecynoic acids, gas chromatography of, 1

XUM

Octadecene, synthesis of aziridine, 384
9-Octadecene, addition of dibromosulfonamides, 27
Octadecenoic acids, gas chromatography of, 1
—— hydrogenation, 79
Oil deodorization, scrubbing of exhaust steam, 47; 556A
Oil refining, waste water treatment, 210A
—— acid, comp from oil refining, 210A
—— arachis (peanut), proposed GLC comp for Codex Committee, 186A
—— addition of hydrogen bromide, 292
—— addition of hydrogen sulfide, 371
—— addition of hypohalous acids, 292
—— autoxidized, 4-*cis*-heptenal in, 414
—— autoxidized, reduction of, 289
—— babassu, optically active lactones, 299
—— bleaching of, 564A
—— bromination with N-bromosuccinimide, 292
—— containing oxirane oxygen, 510
—— *Crambe*, phase behavior by x-ray diffraction, 129
—— *Cruciferae* seed, polymorphism, 129
—— edible, dtmn of copper, 121
—— edible, stability measurement by DSC, 229
—— epoxidized, chemical reactions, 424
—— epoxidized, conversion to hypohalogenated derivative, 180
—— groundnut (peanut), proposed GLC comp for Codex Committee, 186A
—— heated, fatty acid comp, 530
—— hydroxylated, through halogen intermediates, 292
—— kusum, hydroxylation by sulfation-hydrolysis, 286
—— marine, dtmn in vegetable oils, 234
—— maize (corn), proposed comp by GLC for Codex Committee, 186A
—— mechanism of hydrogenation, 490
—— olive, precision of collaborative GLC anal, 415
—— oxidized, carbonyl flavor of, 278
—— palm kernel, optically active lactones, 299
—— precision of GLC anal, 415
—— salad, potential of copper-hydrogenated oil, 470
—— sesame, rapid color reaction of, 303
—— sesameseed, proposed comp by GLC for Codex Committee, 186A
—— specification for comp by GLC, 186A
—— stabilization with malic acid, 168
—— tung, stereoselective hydrogenation, 497
—— unsaturated, hydroxylation, 286
—— waste treatment in lagoons, 402A
Oils, coconut, nutritional properties, 462A
—— optically active lactones, 299
—— precision of collaborative GLC anal, 415
Oils, corn, anal of heated oil, 530
—— fatty acid comp during seed development, 245
—— heated, fatty acid comp, 530
—— ozonolysis, 362
—— partially hydrogenated in rat diets, 487
—— precision of collaborative GLC anal, 415
—— proposed comp by GLC for Codex Committee, 186A
Oils, cottonseed, anal of heated oil, 530
—— comp, using different solvents, 222
—— decolorizing by ferric chloride, 73
—— isomers during hydrogenation, 295
—— malic acid vs. citric acid for AOM stability, 168
—— ozonolysis, 362
—— precision of collaborative GLC anal, 415
—— proposed comp by GLC for Codex Committee, 186A
—— reaction of cyclopropenoid acids with hydrogenation catalysts, 215
—— treatment with antioxidants, 19
Oils, fish, dtmn in vegetable oils, 234
—— epoxidation, 333
—— from alewife, 333
—— hydroxylated, urethanes from, 333
—— urethanes from, 333
Oils, linseed, addition of hydrogen sulfide, 371
—— carbonyl flavor of oxidized oil, 278
—— cyclized, metabolism by rats, 430
—— 4-*cis*-heptenal in autoxidized, 414
—— hydroxylation by autoxidation-reduction, 289
—— hydroxylation through halogen intermediates, 292
—— hydroxylation with sulfuric acid, 286
—— precision of collaborative GLC anal, 415
Oils, mustardseed, hydroxylation by sulfation-hydrolysis, 286
—— phase behavior by x-ray diffraction, 129
—— proposed comp by GLC for Codex Committee, 186A
Oils, peanut, hydroxylation by sulfation-hydrolysis, 286
—— optical activity, 15
—— precision of collaborative GLC anal, 415
—— proposed GLC comp for Codex Committee, 186A
Oils, rapeseed, optical activity, 15
—— phase behavior by x-ray diffraction, 129
—— precision of collaborative GLC anal, 415
—— proposed comp by GLC for Codex Committee, 186A
Oils, safflower, glyceride comp, 193
—— high oleic, comp and reactions, 362
—— homogeneous hydrogenation, 11
—— hydroxylation by autoxidation-reduction, 289
—— hydroxylation through halogen intermediates, 292
—— hydroxylation with sulfuric acid, 286
—— origin of color, 219
—— precision of collaborative GLC anal, 415
—— stereoselective hydrogenation, 497
Oils, safflower seed, phosphatides of, 69
—— proposed comp by GLC for Codex Committee, 186A
—— treatment with antioxidants, 19
Oils, soybean, aged, volatiles from, 393
—— anal of heated oil, 530
—— anal of volatiles, 393
—— carbonyl flavor of oxidized oil, 278
—— conversion to 9-aminononanamide, 183
—— conversion to nylon-9, 183
—— flavor of copper-hydrogenated, 470
—— 4-*cis*-heptenal in autoxidized, 414
—— homogeneous hydrogenation, 11
—— hydrogenation with selective copper catalysts, 106
—— hydrogenated-winterized, anal of heated oil, 530
—— isomers during hydrogenation, 295
—— malic acid vs. citric acid for AOM stability, 168
—— optical activity of, 15
—— oxidized, buttery and fishy flavor components, 278
—— ozonolysis, 362
—— precision of collaborative GLC anal, 415
—— proposed comp by GLC for Codex Committee, 186A
—— selective continuous hydrogenation, 134
—— sodium by flame photometry, 313
—— stereoselective hydrogenation, 497
—— sterols in sludges, 259
—— tocopherol in sludges, 259
—— *trans* isomers during hydrogenation, 494
—— tocored as color precursor, 249
—— treatment with antioxidants, 19
—— washing of alkali refined oil, 137
Oils, sunflower, comp, 248A
—— stability to autoxidation, 24
Oils, sunflowerseed, optical activity, 15
—— proposed comp by GLC for Codex Committee, 186A
—— treatment with antioxidants, 19
Oils, tall, alloy corrosion during distillation, 138A
—— use in iron ore flotation, 189
Oils, vegetable, antioxidant treatment of, 19
—— dtmn of BHA and BHT in, 7
—— dtmn of fish oil in, 234
—— homogeneous hydrogenation, 11
—— optical activity of, 15
—— production in South Africa, 40A
Oilseed extraction, desolventizing, 458A
Oilseed meals, dtmn of residual solvent, 17
—— effect of desolventizing methods, 458A
—— grinding of, 360A
—— rapid nitrogen dtmn, 171
—— residual solvent in, 231
Oilseed proteins, functional properties, 402
—— nutritive value, 408
—— use of, 398, 402
Oilseeds, *Crambe abyssinica*, polymorphic phases, 129
—— *Brassica campestris*, polymorphic phases, 129
—— *Brassica napus*, polymorphic phases, 129
—— drying of, 366A
—— *Erysimum orientale*, polymorphic phases, 129
—— *Sinapis alba*, polymorphic phases, 129
Olefins, addition of dibromosulfonamides, 27
—— hydrogenation homogeneous catalyst, 478
Olefin sulfonates, effect on skin contact angle, 83
—— GLC anal, 505
Oleic acid, from high oleic safflower oil, 362
—— methyl ester, addition of dibromosulfonamides, 27
—— methyl ester, addition of hydrogen sulfide, 371
—— methyl ester, synthesis of aziridine, 384
—— micro vapor-phase hydrogenation, 79
—— sucrose esters, 56
Oleic safflower oil, comp, 362
Oleyl alcohol, by hydrogenolysis, 326
—— by reduction of oleates, 326
Olive oil, precision of collaborative GLC anal, 415
Optical activity, of butterfat and vegetable oils, 15
—— of lactones from fats and oils, 299
Osmium, in catalytic hydrogenation, 482
2-Oxalidones, synthesis from oxirane group, 424
Oxidized oils, carbonyl flavor of, 278
Oxirane group, mechanism of ring opening, 424
—— reactions of, 424
—— reaction with dimethyl sulfoxide, 424
Ozonization, of ethylene adducts of dienoic acids, 51
Ozonolysis, of fatty acids, aldehydes in products, 281
—— of high oleic safflower oil, 362

P

Palladium, in catalytic hydrogenation, 482
Palmitates, phase behavior of mono esters, 94
Palmitic acid, alkanolamides of, 91
—— sucrose esters, 56
Palm kernel oil, optically active lactones, 299
Palm oil, color removal in bleaching, 564A
Papermaking, improvement of retenton of starch or pigments, 304
Peanut meal, aflatoxin extraction, 26
—— chemical inactivation of aflatoxins, 173
Peanut oil, hydroxylation by sulfation-hydrolysis, 286
—— optical activity, 15
—— precision of collaborative GLC anal, 415
—— proposed GLC comp for Codex Committee, 186A
Peanuts, *Aspergillus flavus*, growth on, 347
—— nutritional value of protein, 408
—— production in South Africa, 40A
—— sampling for aflatoxin anal, 501
Peanut soapstock, aflatoxins in, 226
PEG. See polyethylene glycol
2,4-Pentadienal, in oxidized soybean oil, 278
PER. See protein efficiency ratio
Permanganate oxidation, dibasic acids from fats, 365
Peroxides, in oils, effect of bleaching, 564A
Peroxidized lipids, free radicals from, 141
PG. See propylgallate
Phosphates, as builders in detergents, 117
—— in detergent formulas, 422
Phosphatides, of cottonseed lipids using various solvents, 222
—— effect on color of safflower seed oil, 69
—— in extracted rapeseed meal, 256
—— of safflower seeds, 69
Phosphatidic acid, in corn, 340
Phosphatidylcholine, in corn, 340
—— of safflower seed oil, 69
Phosphatidylethanolamine, in corn, 340
—— of safflower seed oil, 69
Phosphatidyl glycerol, in corn, 340
Phosphatidyl inositol, in corn, 340
Phosphatidylmyinositol, of safflower seed oil, 69
Phospholipids, of extracted rapeseed meal, 256
—— of maturing corn, 340
—— of pork muscle, 65
—— of turkey tissues, 391
Pig fat, glyceride comp, 75
Platinum catalysts, for homogeneous hydrogenation, 475
Platinum metals, hydrogenation with, 482
PNE. See protein nitrogen efficiency
Pollution, control in oil refining, 210A
Polyoxyethylene cetyl ether, CMC by UV absorption, 273
Polyethylene glycol (PEG), in detergent formulas, 422
Polymers, in heated vegetable oils, 530
Polymorphism, of **Cruciferae** oils, 129
Polyunsaturated fats, conjugation by chromium carbonyls, 33
Polyunsaturates, homogeneous hydrogenation, 11
—— mechanism of hydrogenation, 490
—— in rats fed hydrogenated oils, 487
Polyvinyl alcohol (PVA), in detergent formulas, 422
Polyvinylchloride, trichlorophosphonates as additives, 283
Polyvinyl pyrrolidene (PVP), in detergent formulas, 422
Pork fat, glyceride comp, 75
Pork fat (lard), proposed comp by GLC for Codex Committee, 186A
Pork muscle, lipids of, 65
Potassium elaidate, hydrogenation, 374
Potassium linoleate, hydrogenation, 374
PRE. See protein retention efficiency
Premier Jus (edible tallow), proposed comp by GLC for Codex Committee, 186A
Propyl gallate (PG), effect on autoxidation of conjugated octadecadienoates, 369
—— treatment of crude vegetable oils, 19
Prostaglandin E_2, relation to arachidonic acid, 418A
Protein bodies, in soybean cells, 316
Protein denaturation, during desolventizing, 458A
Protein dispersibility, 402
Protein efficiency ratio (PER), dtmn, 453
Protein nitrogen efficiency (PNE), definition, 453
Protein retention efficiency (PRE), definition, 453
Proteins, characterization of, 316
—— density gradient centrifugation, 316
—— gel filtration chromatography, 316
—— immunochemical reactions, 316
—— isoelectric focusing, 316
—— nutritional value of, 453
—— oilseed, nutritive value, 408
—— oilseed, use of, 398, 402
—— polymerization in oxidizing oil systems, 141
—— rapid dtmn in oilseed meals, 171
—— release from soybean cells, 316
—— scanning electron microscopy, 316
—— separation by filtration, 316
—— techniques, review, 316
—— ultracentrifugation, 316
—— world supply, 498A
Protein solubility, 402
Pulp, improvement of starch retention by cationics, 304
Pulverizer, for oilseed meals, 360A
PVA. See polyvinyl alcocohol
PVP. See polyvinyl pyrrolidone

Q

Quaternaries, CMC by UV absorption, 273
Quaternary ammonium salts, in iron ore flotation, 177

—— as starch retention agents in pulp, 304
Quaternary surfactants, effect on skin contact angle, 83

R

Radicals, in lipid-protein systems, 141
Radiolabeled soil, in detergency studies, 379
Rapeseed meal, residual lipids of, 256
Rapeseed oil, optical activity, 15
—— phase behavior by x-ray diffraction, 129
—— precision of collaborative GLC anal, 415
—— proposed comp by GLC for Codex Committee, 186A
Rat liver fats, on hydrogenated oil diet, 487
Reduction, of oleates to oleyl alcohol, 326
Reductive amination, of 12-ketostearic acid, 311
Refining, continuous waste water treatment, 210A
—— miscella, waste water treatment, 210A
—— waste wash procedure, 137
Rhodium, in catalytic hydrogenation, 482
Rice, nutritional value of protein, 408
Ricinoleates, of diols, 145
Ricinoleic acid, diester formation with dihaloalkanes, 145
Rosin, hydroxymethylated, esters with glycidyl ethers, 3
Rosin acids, esters with glycidyl ethers, 3
Ruminants, effect of gossypol in feed, 448
Ruthonium, in catalytic hydrogenation, 482

S

Safflower oil, glyceride comp, 193
—— high oleic, comp and reactions, 362
—— homogeneous hydrogenation, 11
—— hydroxylation by autoxidation-reduction, 289
—— hydroxylation through halogen intermediates, 292
—— hydroxylation with sulfuric acid, 286
—— origin of color, 219
—— precision of collaborative GLC anal, 415
—— stereoselective hydrogenation, 497
Safflower seed, color in oil from Arizona Brown stripe, 219
—— sugars of, 254
Safflowerseed oil, phosphatides of, 69
—— proposed comp by GLC for Codex Committee, 186A
—— treatment with antioxidants, 19
Salad oil, potential of copper-hydrogenated oil, 470
Sampling, of peanuts for aflatoxin anal, 501
Saponins, soybean, TLC, 86
Saturated glycerides, dtmn in fats, 366
Sausage, use of soy proteins, 402
Scanning electron microscopy, of proteins, 316
—— of soy flour, 107
Schneckens, use in desolventizing, 458A
Seeds, biosynthesis of triglycerides, 100
Selective hydrogenation, continuous process, 134
—— isomers from linolenate, 262, 266
—— kinetics with copper catalyst, 266, 269
—— with copper catalyst, 262, 266, 269
Selectivity, of hydrogenation, 490
—— of platinum metal hydrogenation catalysts, 482
Sequestrants, in detergent formulas, 422
Sesame oil, rapid color reaction of, 303
Sesameseed oil, proposed comp by GLC for Codex Committee, 186A
Sesamol, effect on autoxidation of conjugated octadecadienoates, 369
Shortenings, dtmn of copper, 121
—— electron microscopy of, 535
Shrimp, Alaska, oil comp, 451
Silicates, as builders in detergents, 117
—— in detergent formulas, 422
Sinapis alba, polymorphic phases, 129
β-Sitosterol, retention times of butyrates in GLC, 259
Skin, effect of surfactants on contact angle, 83
Soaps, copper, surface tension in nonaqueous systems, 329
—— effect on skin contact angle, 83
—— hydrogenation of, 374
—— in refined soybean oil, 313
—— uranyl, 115
Soapstock acidulation, waste water anal, 210A
Soapstocks, acidulated, comp of, 210A
—— aflatoxin in, 414
—— dtmn of aflatoxins, 226
Sodium, anal. in oils, 552A
—— in soybean oil by flame photometry, 313
Sodium alkyl sulfates, biodegradation, 203
Sodium borate, in detergent formulas, 422
Sodium carbonates, in detergent formulas, 422
Sodium nitrilotriacetate, in detergent formulas, 422
Sodium silicates, in detergent formulas, 422
Solubility, of fatty acids in solvents, 233
Solvent, dtmn in oilseed meals, 231
—— dtmn in oilseed meals and flours, 17
—— removal from extracted oilseeds, 458A
Solvent extraction, cottonseed by acetone-hexane-water, 4A
—— of glandless cottonseed, 4A
—— of sunflower seed, 248A
Sorbitol, phase behavior of mono esters, 94
South Africa, vegetable oilseed production, 40A
Soya sludge, tocopherol and sterol content, 259
Soybean extraction, desolventizing, 458A
Soybean globulins, disulfide interchange, 316
—— polymers, 316
Soybean meal, dtmn of residual solvent, 17
—— grinding of, 360A
Soybean methyl esters, homogeneous hydrogenation, 475
Soybean oil, aged, volatiles from, 393
—— anal of heated oil, 530
—— anal of volatiles, 393
—— autoxidized, volatiles from, 393
—— carbonyl flavor of oxidized oil, 278
—— conversion to 9-aminononanamide, 183
—— conversion to nylon-9, 183
—— flavor of copper-hydrogenated, 470
—— 4-*cis*-heptenal in autoxidized, 414
—— homogeneous hydrogenation, 11
—— hydrogenated-winterized, anal of heated oil, 530
—— hydrogenation with selective copper catalyst, 106
—— isomers during hydrogenation, 295
—— *trans* isomers during hydrogenation, 494
—— malic acid vs. citric acid for AOM stability, 168
—— optical activity of, 15
—— oxidized, buttery and fishy flavor components, 278
—— oxidized, volatiles from, 393
—— ozonolysis, 362
—— precision of collaborative GLC anal, 415
—— proposed comp by GLC for Codex Committee, 186A
—— selective continuous hydrogenation, 134
—— sodium by flame photometry, 313
—— stereoselective hydrogenation, 497
—— sterols in sludges, 259
—— tocopherol in sludges, 259
—— tocored as color precursor, 249
—— treatment with antioxidants, 19
—— washing of alkali refined oil, 137
Soybean oil shortening, anal of heated oil, 530
Soybean protein, classification by ultracentrifuge, 316
—— edible uses, 398, 402
—— electron micrography, 316
—— scanning electron microscopy, 107
Soy protein concentrates, in foods, 398, 402
Soybeans, drying of, 366A
—— nutritional value of protein, 408
—— production in South Africa, 40A
Soybean saponins, TLC, 86
Soybean soapstock, typical anal, 210A
Soy flour, dtmn of residual solvent, 17
—— in foods, 398, 402
—— scanning electron microscopy, 107
Spectroscopy, atomic absorption, Committee Report, 552A
—— infrared, *trans*-content of fats, 552A
—— of oils, 1970 Committee Report, 552A
Stability of edible oils, dtmn by DSC, 229
Starch, improvement of retention on pulp, 304
Starch based polyelectrolytes, as detergent builders, 522
Starch carboxylated, as detergent builder, 522
Stearates, phase behavior of mono esters, 94
Stearic acid, alkanolamides of, 91
Sterculic acid, methyl ester, reaction with hydrogenation catalysts, 215
—— methyl ester, synthesis of, 77
Sterolic acid, synthesis of sterculic acid from, 77
Sterols, chromatographic anal as butyrates, 259
—— chromatographic dtmn in sludges, 259
Steryl glycosides, in corn, 340
Stigmasterol, retention times of butyrates in GLC, 259
Sucrose esters, by interesterification, 56
Sugars, of safflower seed, 254
Sulfated monoglycerides, in ore flotation, 504A
Sulfation, of alkanolamides, 91
—— of linear synthetic alcohols, 229
—— of unsaturated oils, 286
Sulfolipids, in corn, 340
Sulfonates, CMC, 197
—— in detergents, automated dtmn, 200
—— GLC anal, 505
Sulfopropionates, prep and properties, 158
Sulfosuccinates, CMC by UV absorption, 273
α-Sulfo tallow acids, biodegradation, 203
Sultones, from unsaturated oils and sulfuric acid, 286
Sunflower oil, comp, 248A
—— stability to autoxidation, 24
Sunflowerseed, processing by prepress-solvent extraction, 248A
—— production in South Africa, 40A
Sunflowerseed meal, comp, 248A
Sunflowerseed oil, optical activity, 15
—— proposed comp by GLC for Codex Committee, 186A
—— treatment with antioxidants, 19
Surfactants, CMC by UV absorption, 273
—— cold water detergency, 379
—— effect on contact angle of skin, 83
—— in flotation of molybdenite, 504A
—— properties of alkyl sulfopropionates, 158
—— properties of sulfated alkanolamides, 91
Swine, effect of gossypol in feed, 448

T

Tall oil, alloy corrosion during distillation, 138A
—— use in iron ore flotation, 189
Tall oil fatty acids, precision of collaborative GLC anal, 415
Tallow, edible, proposed comp by GLC for Codex Committee, 186A
—— flame-resistant urethane foams from, 180
—— malic acid vs. citric acid for AOM stability, 168
Tallow alcohol sulfates, biodegradation, 203
Tallow primary amine, in iron ore flotation, 177
Tallow soapstock, typical anal, 210A
Tamunuts, edible cottonseed kernels, 102
TBHQ. See tertiary butylhydroquinone
Tertiary butylhydroquinone, treatment of crude vegetable oils, 19
Tetracosanoic acid, in herring lipids, 42
15-Tetracosenoic acid, in herring lipids, 42
Tetracosahexaenoic acid, in herring lipids, 42
Tetracosapentaenoic acid, in herring lipids, 42
Tetracosatetraenoic acid, in herring lipids, 42
Tetradecyl-α-sulfobutyrate, biodegradation, 203
Textile lubricants, evaluaton of alkyl polyglucosides, 162
Textured oilseed protein foods, 398
Thiols, from hydrogen sulfide addition to fatty acids, 371
L-Thyroxine, effect on autoxidation of conjugated octadecadienoates, 369
Toasting, of oilseed meals, 458A
Tocols, in corn kernels, 337
α-Tocopherol, in corn kernels, 337
—— effect on autoxidation of conjugated octadecadienoates, 369
—— retention times of butyrates in GLC, 259
β-Tocopherol, retention times of butyrates in GLC, 259
δ-Tocopherol, in corn kernels, 337
—— retention times of butyrates in GLC, 259
γ-Tocopherol, in corn kernels, 337
—— retention times of butyrates in GLC, 259
Tocopherols, of corn kernel, 337
—— chromatographic anal as butyrates, 259
—— chromatographic dtmn in sludges, 259
—— role in oil color, 249
Tocored, as a color precursor in soybean oil, 249
—— reaction with unsaturated fatty acids, 249
Tocotrienol, in corn kernels, 337
Toxicity, of castor bean pomace, 458
—— measurement in protein food sources, 453
Trienoic acids, hydrogenation with copper catalysts, 266, 269
Triglyceride composition, limitation of oxidation methods, 193
Triglycerides, biosynthesis in seeds, 100
—— mechanism of hydrogenation, 490
Trihydroxy-octadecenoic acid, from linoleic acid oxidation in dough, 352
9,10,13-Trihydroxy-11(trans)-octadecenoic acid, 352
9,12,13-Trihydroxy-10(trans)-octadecenoic acid, 352
Trilinolein, hydrogenation with copper catalyst, 467
Trilinolenin, isomerization during hydrogenation, 237
Triolein, flame-resistant urethane foams from, 180
Tripolyphosphates, in detergent formulas, 422
Triterpene diol, of carnauba wax, 514
Tung oil, stereoselective hydrogenation, 497
Turkey, comp of lipids, 391

U

Ultracentrifugation, of proteins, 316
Ultraviolet absorption, for dtmn of CMC, 273
Unsaturated fatty acids, reaction with tocored, 249
Unsaturated oils, hydroxylation, 286
Unsaturation, by NMR spectroscopy, 153
trans-Unsaturation, during hydrogenation, 494
Uranyl soaps, 115
Urea segregation, of oleic safflower oil, 362
Urethane foams, based on animal fats, 180
—— from hypohalogenated fats, 180
Urethane polymers, from hydroxylated fish oil, 333

V

Valeric acid, properties of copper salts, 519
Vapor desolventizer, for extracted oilseeds, 458A
Vegetable oils, antioxidant treatment, 19
—— dtmn of BHA and BHT in, 7
—— dtmn of fish oil in, 234
—— homogeneous hydrogenation, 11
—— optical activity of, 15
—— production in South Africa, 40A
Vernolic acid, in seed oils, 510
Vinyl rosins, trichlorophosphonates as additives, 283

W

Walden inversion, in attack on oxirane group, 424
Wastes, treatment in aerated lagoons, 402A
Water, continuous treatment from oil refining, 210A
—— effect in linoleate autoxidation, 539
Wheat, nutritional value of protein, 408
Wheat flour, enzymatic oxidation of linoleate in dough, 352

X—Y—Z

X-ray diffraction, 1970 Committee Report, 552A
Xylitol, phase behavior of mono esters, 94

XUM

NEWS

A

Achema Year Book 1968–1970, 480A
Ajinomoto Company of Japan, licenses Soviet process for fatty acids, 238A
American Soybean Association, announces new profit panel, 587A
AOCS Commentary, Enthusiasm and Momentum Key to Society's Growth, by G. C. Cavanagh, 252A
—— Membrane model systems, 428A
—— Permanent headquarters is selected for AOCS, by C. H. Hauber, Executive Director, 502A
—— 1970–71 President's Inauguration Address, by S. S. Chang, 254A
AOCS Travel Club, photos of dinner, 537A
Association of Official Analytical Chemists, to hold 84th annual meeting in Oct. 1970, 267A
—— publishes 11th edition of official methods, 532A
Award in Lipid Chemistry, awarded to E. P. Kennedy, 545A
—— call for nominations for seventh award, 25A, 48A, 126A
—— call for nominations for eighth award, 558A
Award of Merit, call for nominations, 8A, 65A, 585A
—— given to R. T. Doughtie and R. A. Reiners, 524A,
—— given to H. J. Harwood at New Orleans meeting, 266A

B

Bartholomew, D. M. Fats and Oils Reports, 50A, 148A, 224A, 362A, 466A, 568A
Benerito, Ruth R., receives Distinguished Service Award from USDA, 256A
Black, George. Pilot unit determines design parameters of steam-jet vacuum equipment for production plants, 556A
Book Reviews—*Analytical Instrumentation,* by Ewing, 106A
—— *Ancillary Techniques of Gas Chromatography,* edited by Etter and McFadden, 516A
—— *Bleaching Earths,* by Siddiqui, 10A
—— *The Chemistry and Physics of High Energy Reactions,* by Henley and Johnson, 203A
—— *Gas Chromatography,* edited by Morgan, 543A
—— *Infrared Spectroscopy—Its Use in the Coatings Industry,* by The Infrared Spectroscopy Committee of the Chicago Society for Paint Technology, 106A
—— *Instrumentation in the Chemical & Petroleum Industries, Vol. 5,* edited by Robinson, 10A
—— *Margarine: An Economic, Social and Scientific History, 1869–1969,* edited by van Stuyvenberg, 516A
—— *Organic Peroxides, Vol. 1.* edited by Swern, 516A
—— *Paint Technology Manuals, Part 1. Non-Convertible Coatings,* edited by Taylor and Marks, 203A
—— *Paint Technology Manuals, Part 2, Solvents, Oils, Resins and Driers,* edited by Taylor and Marks, 203A
—— *Paraffins Chemistry and Technology,* edited by Steiner, 10A
—— *Process in Thin Layer Chromatography and Related Methods,* edited by Niederweiser and Pataki, 518A
—— *Surfactant Science Series, Vol 4, Cationic Surfactants,* edited by Jungermann, 542A
—— *Topics in Stereochemistry, Vol. 4,* edited by Eliel and Allinger, 518A
Bread, experimental bakery to produce bread from nontraditional grains to be set up in Bogota, 483A
Bunn, Julian W., Jr. Moisture extraction concepts, design and practices from soybeans, 366A
Burns, Michael E. Book review—Organic Peroxides, Vol. I., edited by Swern, 518A

C

Canadian Society for Chemical Engineering, to be held in Oct. 1970, 483A
Cavanagh, G. C. address given at 1970 spring meeting in New Orleans, 252A
CESCO, Inc., announces the marketing of more than a hundred specialized chemical cleaning compounds that self-destruct to aid in pollution control, 494A
Chang, S. S., address given at 1970 spring meeting in New Orleans, 254A
Chapman, L. R. Book review—Ancillary Techniques of Gas Chromatography, edited by Etter and McFadden, 516A
Computer software packages, development to use the Wiswesser Line Notation for naming compounds, 172A
Conrad, L. I., honored by Brooklyn College, 382A
Corresponding Secretary Reports, Argentina, 560A
—— Australia, 412A
—— Chile, 108A, 412A
—— Czechoslovakia, 413A
—— France, 108A, 414A
—— Germany, 414A
—— Great Britain, 562A
—— India, 213A, 562A
—— Italy, 414A
—— Japan, 216A, 588A
—— Poland, 588A
—— Scandinavia, 590A
—— Spain, 218A, 590A
—— Sweden, 233A, 417A
—— Yugoslavia, 423A
Cottonseed flour, light-colored glandless flour developed, 21A
Cottonseed industry, must take new paths speakers say at New Orleans meet, 205A
Crauer, L. S. Continuous treatment of refinery waste waters, 210A
Cross, D. E., D. T. Hopkins, E. L. D'Aquin and E. A. Gastrock. Experiments with solvent extraction of glandless cottonseed and glanded cottonseed, 4A
Crude glycerine, production, 479A
Crude vegetable oil, production summary statistics 1968-70, 201A
Crushing unit, new unit reduces plastics, ores, semimanufactures, chemicals, vegetables, 591A

D

D'Aquin, E. L. See D. E. Cross
Driskell, Leslie R. Book review—Instrumentation in the Chemical and Petroleum Industries, Vol. 5, edited by Robinson, 10A
Dutton, Herbert J. Computer-guided explorations in lipid chemistry, 98A

E

Eastman Kodak, offers unusual features in waste treatment plant, 595A
Eighth International Symposium, to be held in Dublin Sept. and Oct. 1970, 9A
Emery Industries, glycerine refining plant now in successful operation, 589A
Endres, J. G. Book review—The Chemistry and Physics of High Energy Reactions, by Henley and Johnson, 203A
European Federation of Chemical Engineering, 95th event to take place in June 1970, 193A

F

Fats and Oils Report, lard prices versus soybean oil futures, 362A
—— a market in "ifs", 148A
—— Peru leads the fishmeal market, 568A
—— soybean oil consumption patterns, 50A
—— soybean outlook, 1970–71, 466A
—— speculative open interest in soybean futures, 224A
Fats and oils situation, summary of report, 187A
Fatty acid complex, for Burma now in successful operation, 274A
Fatty Acid Producers Council, photos of luncheon, 537A
Fatty acids, statistics, 197A, 587A
Feeds and foods, the problems of mold in, 59A
Food and Drug Administration, establishes guidelines for the nutritional quality of certain classes of foods, 501A
Foster-Wheeler Corporation, builds protein-from-petroleum plant in France, 589A
Freeze-dried foods, commercialization of, 160A
French chemical industry, exhibition at trade fair in 1971, 513A

G

Garrison, L. J. Book review—Surfactant Science Series, Vol. 4, Cationic Surfactants, edited by Jungermann, 542A
Gastrock, E. A. See D. E. Cross
Germany, chromatography and spectroscopy use rises sharply, 480A
Glycerine, production 198A
Glycerine production, statistics, 589A
Gray, Linsley S., Jr. Book review—Analytical Instrumentation, by Ewing, 106A
Gribou, H. G., to direct C & K Research, 591A
Guide to Authors, manuscript preparation, 27A

H

Haas, S. R. Report on vegetable oilseeds production and vegetable oil production in the Republic of South Africa, 40A
Hahn, Edward R. Book review—Bleaching Earths, by Siddiqui, 10A
Harrisons and Crosfield of England, opened new research station, 432A
Harwood, H. J., receives Award of Merit, 266A
Hauber, C. H. AOCS Commentary—Permanent headquarters is selected for AOCS, 502A
High nutrition confections, to improve child nutrition in developing countries, 11A
Hodag Chemical Corporation, establishes new Mexican subsidiary, 494A
Holt, Kenneth E. Book review—Paint Technology Manuals, Part 1. Non-Convertible Coatings, edited by Taylor and Marks, 203A
—— Book review—Paint Technology Manuals, Part 2. Solvents, Oils, Resins and Driers, by Taylor and Marks, 203A
Honored Student Award Program, call for nominations, 21A, 585A
—— contributions being accepted, 254A, 378A
Hopkins, D. T. See D. E. Cross

I

Instrumental Techniques Committee, 1970 report, 552A
Instrument Society of America, to hold silver jubilee conference and exhibit, 473A
International Commission on Analysis, 13th annual session was held in Vienna Oct. 1969, 55A
International Council of Scientific Unions Abstracting Board, plan for first stage of a world system for abstracting and indexing services for science and technology, 468A
International Society for Fat Research, AOCS to host first world congress to be held in United States, 144A, 188A, 216A
Italian Association of Food Science, active in third year, 587A

J

Journal Committee, adopts new policy and presents guide to authors regarding symposia publication policies, 468A

K

Kansas State University, finds addition of animal fat adds nutritive value, reduces air pollution from alfalfa dehydrator plants, 452A
Kaunitz, Hans. Nutritional properties of coconut oil, 462A
Kennedy, E. P., receives Award in Lipid Chemistry, 545A
Kenyon, William R. Aerated lagoons for the treatment of fats and oil industry wastes, 402A
King, C. G. Biological and medical aspects of fats, 418A
Kingsbaker, C. L. Solvent extraction techniques for soybeans and other seeds: Desolventizing and toasting, 458A

L

Liebenow, Robert C. Closing the world protein gap, 498A
Low cost-high protein soft drink, developed by food and beverage firm in Singapore, 489A
Lundberg, W. O., receives Chevreul Medal for 8th time, 432A
—— receives and accepts Marques de Acapulco Medal, 524A
—— welcoming address to participants of AOCS-ISF congress, 522A

M

Mangold, H. K., message read at world congress, 524A
Manuscript preparation, guide to authors, 27A
Margarine, U.S. consumption up, 148A
Meetings of AOCS, 1970, spring, New Orleans, committee meetings schedule, 104A
—— complete program, 71A
—— golf winners, 266A
—— ladies' program calendar, 104A
—— planning is in the home stretch, 8A
—— photos of committee sessions, 283A
—— photos of ladies events, 281A
—— photos of moments of relaxation, 285A
—— photos of presidents supper and 1970 awards, 287A
—— photos of technical sessions, 289A, 291A
—— social events calendar, 104A
—— vacation in Indies planned after meeting, 60A
Meetings of AOCS, 1970, fall Chicago, announce computer symposium for chemists, 227A
—— committee meeting schedule, 364A
—— complete technical program, 295A
—— computer symposium "tells how", 369A
—— exhibit information, 243A
—— list of exhibitors, 408A
—— newest detergency concepts to be heard, 235A
—— photos of AOCS committees, 518A

—— photos of committees at work, 521A
—— photos of a continental touch for the ladies, 535A
—— photos of exchanges of ideas, 533A
—— photos of exhibitors, 539A, 541A
—— photos of honored student activities, 531A
—— photos of informal shop talk, 507A
—— photos of moments of relaxation, 525A
—— photos of technical sessions, 517A
—— photos of Tuesday evening concert and reception, 523A
—— plans for technical program, 259A
—— scene of 44th AOCS meeting and 10th Biennial Congress of ISF, 214A
—— short courses in conjunction with the World Congress, 258A
—— symposium on basic aspects of detergency, 275A
—— World Congress and AOCS afternotes, 506A

Meetings of AOCS, 1971, spring, Houston, first call for papers, 466A
—— last call for papers, 536A
—— photos of planning committee chairmen, 526A
—— symposia scheduled, 558A
—— to be at Shamrock Hilton Hotel, 406A

Michigan State University, has new department of food science and human nutrition, 591A

N

National Bureau of Standards, new method improves Fourier transform NMR, 65A
—— uses time-sharing computer, 592A

National Renderers Association, Japan tallow team tours U.S. rendering, soap manufacturing facilities, 414A2
—— participates in far east festival and exhibition, 387A

New York Academy of Sciences, announces Dr. Julian Schwinger, Nobel Laureate in Physics and Prof. George Porter of London, Nobel Laureate in Chemistry, to serve as Scientists-in-Residence, 201A

New York State University, holds 3 day short course Oct. 1970, 371A

North Dakota State University, Polymers and Coatings Department sponsors 12th annual symposium on new coatings and new coatings raw materials, 142A

O

Obituaries, Adams, E. W., 168A
—— Blume, M. C., 587A
—— Boulden, John A., 277A
—— Brown, J. B., 479A
—— Glendhill, Albert, 587A
—— Hutton, Harvey L., 277A
—— Kitsuta, Kisaku, 168A
—— Martin, F. C., 11A
—— Mueller, Ernest R., 168A
—— Murti, K. S., 501A
—— Seestrom, H. E., 277A
—— Stirton, A. J., 480A
—— Walton, L. L., 11A
—— Wamble, A. Cecil, 587A

O'Connor, Robert T. Book review—Infrared Spectroscopy—Its Use in the Coatings Industry, by the Infrared Spectroscopy Committee of the Chicago Society for Paint Technology, 106A
—— Instrumental Techniques Committee, 1970 report, 552A
—— and S. F. Herb. Specifications of fatty acid composition for identification of fats and oils by gas liquid chromatography, 186A

Officers of AOCS, 1970-71 candidates nominated, 44A
—— 1970-71 officers announced, 190A

P

Pallet shrink wrapping, with polyethylene film, 489A

Palmby, C. D., delivers opening plenary address of ISF-AOCS world congress, 522A

Pelick, Nicholas. Book Review—Process in Thin Layer Chromatography and Related Methods, edited by Niederweiser and Pataki, 518A

Perkins, E. G. Book review—Topics in Stereochemistry, Vol. 4, edited by Eliel and Allinger, 518A

Pfizer Chemicals Division, expands fumaric acid capacity at Terre Haute plant, 274A

Pierce, R. M. Sunflower processing techniques, 248A

Potts, Ralph H., named honorary member of AOCS, 256A

Preservation, of fatty foods, the role of antioxidants, 573A

Procter and Gamble, reports on program to reduce phosphates in detergents, 595A

Protein Advisory Group, offers publication bulletin, 65A

Protein Foods Association of India, excerpts of speech of March 1970, 572A

Q

R

Referee Applications, first notice, 258A
—— second notice, 371A

Referee Chemists, official listings for 1970-71, 470A

Reticuloendothelial Society, fourth international meeting to be July 1970, 210A

Retired membership category, response to new category slow as members renew AOCS memberships for 1970, 11A

Rich, A. D. Some fundamental aspects of bleaching, 564A

Richardson, A. S., AOCS past president honored with Princeton Class Cup, 385A

Ronzio, R. A. The role of surfactants in the flotation of molybdenite at climax, 504A

S

Sections of AOCS, North Central Section, awards Baily Award to H. E. Carter,
—— photos of May 1970 meeting, 273A
—— meeting of Oct. 1970, 578A
—— photos of May 1970 meeting, 273A

Sections of AOCS, Northeast Section, Achievement Award to be presented to S. S. Chang at Sept. 1970 meeting, 198A
—— agenda for Oct. 1970 meeting announced, 468A
—— April 1970 symposium successful, photos, new officers announced, 271A
—— photos of Dec. 1969 meeting, 15A
—— photos of Feb. 1970 meeting, 110A
—— photos of meeting of Oct. 21, 1970, 578A
—— plans 1970 symposium, 13A
—— short biography of S. S. Chang, receiver of Achievement Award, 511A

Sections of AOCS, Northern California Section, new steering committee officers announced, 152A
—— meeting of Nov. 20, 1970, 578A
—— photos of May 1970 meeting, 381A

Seelbach, Charles W. Book review—Paraffins Chemistry and Technology, edited by Steiner, 10A

Short Course, Sept. 1970, Michigan State University, to be on processing and quality control of fats and oils, 226A
—— 1971, Lake Placid, N.Y., program to be on surfactants, detergents and raw materials, 452A

Shortening Institute, pollution committee issues first report, 414A2

Single cell protein, scientist says it may become important world protein source, 378A

Slick Corporation, to sell certain Drew assets to PVO, 589A

Smalley Program, 1970-71 check sample program announced, 160A, 191A, 230A

Soap and Detergent Association, reports soap and synthetic detergent sales rise to new high for first half of 1970, 595A

Society for Applied Spectroscopy, to hold 10th annual meeting in Oct. 1971, 414A2

Society of Cosmetic Chemists, to hold joint conference with The College of Pharmaceutical Sciences in Nov. 1970, 267A

Society for Industrial Analytical Chemists, founding meeting to be held in March 1970, 55A

Soybean growers, plan to average 45 bushels per acre in 1970, 205A

Soybean harvest, losses top $84 million, 583A

Soybean processors fund, $20,000 for production research, 201A

Synthetic food and feed industry, growth surveyed at National Bureau of Standards, 239A

T

Tall oil fatty acids, production statistics, 163A
—— statistics, 479A

Tallow, U.S. exports down slightly in 1969, 387A

Templeton, Harold C. Corrosion of alloys in tall oil distillation service, 138A

Third International Congress, to be held August 1970, 9A

Thomas, B. L. Book review—Margarine: An Economic, Social and Scientific History, 1869-1969, edited by van Stuyvenberg, 516A

Thomas, George R. The art of oilseed meal grinding, 360A

Tishler, Max, receives 1970 Freedman Foundation Patent Award, 483A

Toilet soap, ITERG to devote its 1970 Days of Information to, 65A, 193A

Trade, free zones abroad provide useful bases for U.S. exporters, 513A

U

United States Department of Agriculture, twenty-five years of research on cottonseed and cottonseed products abstracted in new publication, 468A

United States National Committee for the International Biological Program, and the Public Affairs Council, sponsor new conference on environment, 163A

V

Vitamin fortification, of foods aim of Eastman IFT exhibit, 393A

W

Washington University, to hold short course on chemical engineering economics, 473A
—— to hold short course on the latest technology in the design of distillation columns, 473A
—— to offer course on computers in analytical laboratories, 591A

Weiser, Herman J., Jr. Book review—Gas Chromatography, edited by Morgan, 542A

Westheimer, F. H., receives Willard Gibbs Medal, 274A

X—Y—Z

XUM

XUM